



P1618P2C2.txt

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Patent Docket Preview

Sequence Listing

<110> Chen, Jian
Goddard, Audrey
Gurney, Austin L.
Hillan, Kenneth
Pennica, Diane
Wood, William I.
Yuan, Jean

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Acids Encoding the Same

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<140> US 09/904,553

<141> 2001-07-13

<150> US 09/665,350

<151> 2000-09-18

<150> PCT/US00/04414

<151> 2000-02-22

<150> PCT/US98/18824

<151> 1998-09-10

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Arg Val Leu Ile Gly Phe Glu Glu Asp Ile Leu Ile Val Ser Glu
50 55 60
Gly Lys Met Ala Pro Phe Thr His Asp Phe Arg Lys Ala Gln Gln
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80 85 90
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| Glu Val Asp Val Ile Val Met Asn Ser Glu Gly Asn Thr Ile Leu | 155 160 | 165 |
| Gln Thr Pro Gln Asn Ala Ile Phe Phe Lys Thr Cys Gln Gln Ala | 170 175 | 180 |
| Glu Cys Pro Gly Gly Cys Arg Asn Gly Gly Phe Cys Asn Glu Arg | 185 190 | 195 |
| Arg Ile Cys Glu Cys Pro Asp Gly Phe His Gly Pro His Cys Glu | 200 205 | 210 |
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| Cys Phe Tyr Pro Gly Lys Cys Ile Cys Pro Pro Gly Leu Glu Gly | 260 265 | 270 |
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| Gly Lys Cys Ile Gly Lys Ser Lys Cys Lys Cys Ser Lys Gly Tyr | 290 295 | 300 |
| Gln Gly Asp Leu Cys Ser Lys Pro Val Cys Glu Pro Gly Cys Gly | 305 310 | 315 |
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P1618P2C2.txt

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P1618P2C2.txt

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80 85 90
Asn Ala Ser Leu Thr Met Tyr Val Cys Thr Pro Val Pro His Pro
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Asp Pro Pro Met Ala Leu Ser Arg Thr Pro Thr Arg Gln Ile Ser
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Cys Cys Cys Phe His Gly Pro Ala Phe Ser Thr Leu Asn Pro Val
140 145 150
Leu Arg His Leu Phe Pro Gln Glu Ala Phe Pro Ala His Pro Ile
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<210> 22

<211> 1200

<212> DNA

<213> Homo Sapien

<400> 22

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<211> 205

<212> PRT
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 Arg Ile Ser Ala Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu
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 Ala Glu Ser Glu Lys Tyr Ile Cys Met Asn Lys Arg Gly Lys Leu
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 110 115 120
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 Glu Gly Trp Phe Met Ala Phe Thr Arg Gln Gly Arg Pro Arg Gln
 140 145 150
 Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu Ala His Phe Ile Lys
 155 160 165
 Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn His Ala Glu Lys
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 Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr
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<210> 25
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<223> Synthetic Oligonucleotide Probe

<400> 25

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<223> unknown base

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<211> 2479

<212> DNA

<213> Homo Sapien

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 <212> PRT
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<400> 28

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| Met | Gly | Leu | Gln | Thr | Thr | Lys | Trp | Pro | Ser | His | Gly | Ala | Phe | Phe |
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| Leu | Lys | Ser | Trp | Leu | Ile | Ile | Ser | Leu | Gly | Leu | Tyr | Ser | Gln | Val |
| | | | | 20 | | | | | 25 | | | | | 30 |
| Ser | Lys | Leu | Leu | Ala | Cys | Pro | Ser | Val | Cys | Arg | Cys | Asp | Arg | Asn |
| | | | | 35 | | | | | 40 | | | | | 45 |
| Phe | Val | Tyr | Cys | Asn | Glu | Arg | Ser | Leu | Thr | Ser | Val | Pro | Leu | Gly |
| | | | | 50 | | | | | 55 | | | | | 60 |
| Ile | Pro | Glu | Gly | Val | Thr | Val | Leu | Tyr | Leu | His | Asn | Asn | Gln | Ile |
| | | | | 65 | | | | | 70 | | | | | 75 |
| Asn | Asn | Ala | Gly | Phe | Pro | Ala | Glu | Leu | His | Asn | Val | Gln | Ser | Val |
| | | | | 80 | | | | | 85 | | | | | 90 |
| His | Thr | Val | Tyr | Leu | Tyr | Gly | Asn | Gln | Leu | Asp | Glu | Phe | Pro | Met |
| | | | | 95 | | | | | 100 | | | | | 105 |
| Asn | Leu | Pro | Lys | Asn | Val | Arg | Val | Leu | His | Leu | Gln | Glu | Asn | Asn |
| | | | | 110 | | | | | 115 | | | | | 120 |
| Ile | Gln | Thr | Ile | Ser | Arg | Ala | Ala | Leu | Ala | Gln | Leu | Leu | Lys | Leu |
| | | | | 125 | | | | | 130 | | | | | 135 |
| Glu | Glu | Leu | His | Leu | Asp | Asp | Asn | Ser | Ile | Ser | Thr | Val | Gly | Val |
| | | | | 140 | | | | | 145 | | | | | 150 |
| Glu | Asp | Gly | Ala | Phe | Arg | Glu | Ala | Ile | Ser | Leu | Lys | Leu | Leu | Phe |
| | | | | 155 | | | | | 160 | | | | | 165 |
| Leu | Ser | Lys | Asn | His | Leu | Ser | Ser | Val | Pro | Val | Gly | Leu | Pro | Val |
| | | | | 170 | | | | | 175 | | | | | 180 |
| Asp | Leu | Gln | Glu | Leu | Arg | Val | Asp | Glu | Asn | Arg | Ile | Ala | Val | Ile |
| | | | | 185 | | | | | 190 | | | | | 195 |
| Ser | Asp | Met | Ala | Phe | Gln | Asn | Leu | Thr | Ser | Leu | Glu | Arg | Leu | Ile |
| | | | | 200 | | | | | 205 | | | | | 210 |
| Val | Asp | Gly | Asn | Leu | Leu | Thr | Asn | Lys | Gly | Ile | Ala | Glu | Gly | Thr |
| | | | | 215 | | | | | 220 | | | | | 225 |
| Phe | Ser | His | Leu | Thr | Lys | Leu | Lys | Glu | Phe | Ser | Ile | Val | Arg | Asn |
| | | | | 230 | | | | | 235 | | | | | 240 |
| Ser | Leu | Ser | His | Pro | Pro | Pro | Asp | Leu | Pro | Gly | Thr | His | Leu | Ile |
| | | | | 245 | | | | | 250 | | | | | 255 |
| Arg | Leu | Tyr | Leu | Gln | Asp | Asn | Gln | Ile | Asn | His | Ile | Pro | Leu | Thr |
| | | | | 260 | | | | | 265 | | | | | 270 |
| Ala | Phe | Ser | Asn | Leu | Arg | Lys | Leu | Glu | Arg | Leu | Asp | Ile | Ser | Asn |
| | | | | 275 | | | | | 280 | | | | | 285 |

P1618P2C2.txt

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 305 310 315
 Cys Ser Ile Lys Trp Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser
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 Ser Leu Asn Val Arg Gly Phe Met Cys Gln Gly Pro Glu Gln Val
 335 340 345
 Arg Gly Met Ala Val Arg Glu Leu Asn Met Asn Leu Leu Ser Cys
 350 355 360
 Pro Thr Thr Thr Pro Gly Leu Pro Leu Phe Thr Pro Ala Pro Ser
 365 370 375
 Thr Ala Ser Pro Thr Thr Gln Pro Pro Thr Leu Ser Ile Pro Asn
 380 385 390
 Pro Ser Arg Ser Tyr Thr Pro Pro Thr Pro Thr Thr Ser Lys Leu
 395 400 405
 Pro Thr Ile Pro Asp Trp Asp Gly Arg Glu Arg Val Thr Pro Pro
 410 415 420
 Ile Ser Glu Arg Ile Gln Leu Ser Ile His Phe Val Asn Asp Thr
 425 430 435
 Ser Ile Gln Val Ser Trp Leu Ser Leu Phe Thr Val Met Ala Tyr
 440 445 450
 Lys Leu Thr Trp Val Lys Met Gly His Ser Leu Val Gly Gly Ile
 455 460 465
 Val Gln Glu Arg Ile Val Ser Gly Glu Lys Gln His Leu Ser Leu
 470 475 480
 Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg Ile Cys Leu Val Pro
 485 490 495
 Leu Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp Thr Ile Cys Ser
 500 505 510
 Glu Ala Thr Thr His Ala Ser Tyr Leu Asn Asn Gly Ser Asn Thr
 515 520 525
 Ala Ser Ser His Glu Gln Thr Thr Ser His Ser Met Gly Ser Pro
 530 535 540
 Phe Leu Leu Ala Gly Leu Ile Gly Gly Ala Val Ile Phe Val Leu
 545 550 555
 Val Val Leu Leu Ser Val Phe Cys Trp His Met His Lys Lys Gly
 560 565 570
 Arg Tyr Thr Ser Gln Lys Trp Lys Tyr Asn Arg Gly Arg Arg Lys
 575 580 585
 Asp Asp Tyr Cys Glu Ala Gly Thr Lys Lys Asp Asn Ser Ile Leu
 590 595 600

P1618P2C2.txt

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Met | Thr | Glu | Thr | Ser | Phe | Gln | Ile | Val | Ser | Leu | Asn | Asn | Asp |
| | | | | 605 | | | | | 610 | | | | | 615 |
| Gln | Leu | Leu | Lys | Gly | Asp | Phe | Arg | Leu | Gln | Pro | Ile | Tyr | Thr | Pro |
| | | | | 620 | | | | | 625 | | | | | 630 |
| Asn | Gly | Gly | Ile | Asn | Tyr | Thr | Asp | Cys | His | Ile | Pro | Asn | Asn | Met |
| | | | | 635 | | | | | 640 | | | | | 645 |
| Arg | Tyr | Cys | Asn | Ser | Ser | Val | Pro | Asp | Leu | Glu | His | Cys | His | Thr |
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<400> 31
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 <211> 915
 <212> PRT
 <213> Homo Sapien

<400> 34

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| Met | Glu | Lys | Met | Leu | Ala | Gly | Cys | Phe | Leu | Leu | Ile | Leu | Gly | Gln | 1 | 5 | 10 | 15 |
| Ile | Val | Leu | Leu | Pro | Ala | Glu | Ala | Arg | Glu | Arg | Ser | Arg | Gly | Arg | 20 | 25 | 30 | |
| Ser | Ile | Ser | Arg | Gly | Arg | His | Ala | Arg | Thr | His | Pro | Gln | Thr | Ala | 35 | 40 | 45 | |
| Leu | Leu | Glu | Ser | Ser | Cys | Glu | Asn | Lys | Arg | Ala | Asp | Leu | Val | Phe | 50 | 55 | 60 | |
| Ile | Ile | Asp | Ser | Ser | Arg | Ser | Val | Asn | Thr | His | Asp | Tyr | Ala | Lys | 65 | 70 | 75 | |
| Val | Lys | Glu | Phe | Ile | Val | Asp | Ile | Leu | Gln | Phe | Leu | Asp | Ile | Gly | 80 | 85 | 90 | |
| Pro | Asp | Val | Thr | Arg | Val | Gly | Leu | Leu | Gln | Tyr | Gly | Ser | Thr | Val | 95 | 100 | 105 | |
| Lys | Asn | Glu | Phe | Ser | Leu | Lys | Thr | Phe | Lys | Arg | Lys | Ser | Glu | Val | 110 | 115 | 120 | |
| Glu | Arg | Ala | Val | Lys | Arg | Met | Arg | His | Leu | Ser | Thr | Gly | Thr | Met | 125 | 130 | 135 | |
| Thr | Gly | Leu | Ala | Ile | Gln | Tyr | Ala | Leu | Asn | Ile | Ala | Phe | Ser | Glu | 140 | 145 | 150 | |
| Ala | Glu | Gly | Ala | Arg | Pro | Leu | Arg | Glu | Asn | Val | Pro | Arg | Val | Ile | 155 | 160 | 165 | |
| Met | Ile | Val | Thr | Asp | Gly | Arg | Pro | Gln | Asp | Ser | Val | Ala | Glu | Val | 170 | 175 | 180 | |
| Ala | Ala | Lys | Ala | Arg | Asp | Thr | Gly | Ile | Leu | Ile | Phe | Ala | Ile | Gly | 185 | 190 | 195 | |
| Val | Gly | Gln | Val | Asp | Phe | Asn | Thr | Leu | Lys | Ser | Ile | Gly | Ser | Glu | 200 | 205 | 210 | |
| Pro | His | Glu | Asp | His | Val | Phe | Leu | Val | Ala | Asn | Phe | Ser | Gln | Ile | 215 | 220 | 225 | |

P1618P2C2.txt

Glu Thr Leu Thr Ser Val Phe Gln Lys Lys Leu Cys Thr Ala His
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 Met Cys Ser Thr Leu Glu His Asn Cys Ala His Phe Cys Ile Asn
 245 250 255
 Ile Pro Gly Ser Tyr Val Cys Arg Cys Lys Gln Gly Tyr Ile Leu
 260 265 270
 Asn Ser Asp Gln Thr Thr Cys Arg Ile Gln Asp Leu Cys Ala Met
 275 280 285
 Glu Asp His Asn Cys Glu Gln Leu Cys Val Asn Val Pro Gly Ser
 290 295 300
 Phe Val Cys Gln Cys Tyr Ser Gly Tyr Ala Leu Ala Glu Asp Gly
 305 310 315
 Lys Arg Cys Val Ala Val Asp Tyr Cys Ala Ser Glu Asn His Gly
 320 325 330
 Cys Glu His Glu Cys Val Asn Ala Asp Gly Ser Tyr Leu Cys Gln
 335 340 345
 Cys His Glu Gly Phe Ala Leu Asn Pro Asp Glu Lys Thr Cys Thr
 350 355 360
 Arg Ile Asn Tyr Cys Ala Leu Asn Lys Pro Gly Cys Glu His Glu
 365 370 375
 Cys Val Asn Met Glu Glu Ser Tyr Tyr Cys Arg Cys His Arg Gly
 380 385 390
 Tyr Thr Leu Asp Pro Asn Gly Lys Thr Cys Ser Arg Val Asp His
 395 400 405
 Cys Ala Gln Gln Asp His Gly Cys Glu Gln Leu Cys Leu Asn Thr
 410 415 420
 Glu Asp Ser Phe Val Cys Gln Cys Ser Glu Gly Phe Leu Ile Asn
 425 430 435
 Glu Asp Leu Lys Thr Cys Ser Arg Val Asp Tyr Cys Leu Leu Ser
 440 445 450
 Asp His Gly Cys Glu Tyr Ser Cys Val Asn Met Asp Arg Ser Phe
 455 460 465
 Ala Cys Gln Cys Pro Glu Gly His Val Leu Arg Ser Asp Gly Lys
 470 475 480
 Thr Cys Ala Lys Leu Asp Ser Cys Ala Leu Gly Asp His Gly Cys
 485 490 495
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 Lys Asp Val Cys Gln Ala Ile Asp His Gly Cys Glu His Ile Cys
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P1618P2C2.txt

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Arg Leu Ala Glu Asp Gly Lys Arg Cys Arg Arg Lys Asp Val Cys
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Lys Ser Thr His His Gly Cys Glu His Ile Cys Val Asn Asn Gly
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Asn Ser Tyr Ile Cys Lys Cys Ser Glu Gly Phe Val Leu Ala Glu
590 595 600

Asp Gly Arg Arg Cys Lys Lys Cys Thr Glu Gly Pro Ile Asp Leu
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Val Phe Val Ile Asp Gly Ser Lys Ser Leu Gly Glu Glu Asn Phe
620 625 630

Glu Val Val Lys Gln Phe Val Thr Gly Ile Ile Asp Ser Leu Thr
635 640 645

Ile Ser Pro Lys Ala Ala Arg Val Gly Leu Leu Gln Tyr Ser Thr
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Gln Val His Thr Glu Phe Thr Leu Arg Asn Phe Asn Ser Ala Lys
665 670 675

Asp Met Lys Lys Ala Val Ala His Met Lys Tyr Met Gly Lys Gly
680 685 690

Ser Met Thr Gly Leu Ala Leu Lys His Met Phe Glu Arg Ser Phe
695 700 705

Thr Gln Gly Glu Gly Ala Arg Pro Leu Ser Thr Arg Val Pro Arg
710 715 720

Ala Ala Ile Val Phe Thr Asp Gly Arg Ala Gln Asp Asp Val Ser
725 730 735

Glu Trp Ala Ser Lys Ala Lys Ala Asn Gly Ile Thr Met Tyr Ala
740 745 750

Val Gly Val Gly Lys Ala Ile Glu Glu Glu Leu Gln Glu Ile Ala
755 760 765

Ser Glu Pro Thr Asn Lys His Leu Phe Tyr Ala Glu Asp Phe Ser
770 775 780

Thr Met Asp Glu Ile Ser Glu Lys Leu Lys Lys Gly Ile Cys Glu
785 790 795

Ala Leu Glu Asp Ser Asp Gly Arg Gln Asp Ser Pro Ala Gly Glu
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Leu Pro Lys Thr Val Gln Gln Pro Thr Glu Ser Glu Pro Val Thr
815 820 825

Ile Asn Ile Gln Asp Leu Leu Ser Cys Ser Asn Phe Ala Val Gln
830 835 840

His Arg Tyr Leu Phe Glu Glu Asp Asn Leu Leu Arg Ser Thr Gln
845 850 855

Lys Leu Ser His Ser Thr Lys Pro Ser Gly Ser Pro Leu Glu Glu
860 865 870

Lys His Asp Gln Cys Lys Cys Glu Asn Leu Ile Met Phe Gln Asn
875 880 885

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<211> 22

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<400> 36

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<210> 37

<211> 45

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<223> Synthetic Oligonucleotide Probe

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<210> 38

<211> 1813

<212> DNA

<213> Homo Sapien

<400> 38

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gactccgtcc cggccagggg gggccatgat ttccctccc gggcccctgg 150

tgaccaactt gctgcggttt ttgttcctgg ggctgagtgc cctcgcgccc 200

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 <213> Homo Sapien

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Leu Gln Leu His Leu Pro Ala Asn Arg Leu Gln Ala Val Glu Gly
          35           40           45

Gly Glu Val Val Leu Pro Ala Trp Tyr Thr Leu His Gly Glu Val
          50           55           60

Ser Ser Ser Gln Pro Trp Glu Val Pro Phe Val Met Trp Phe Phe
          65           70           75

Lys Gln Lys Glu Lys Glu Asp Gln Val Leu Ser Tyr Ile Asn Gly
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Val Thr Thr Ser Lys Pro Gly Val Ser Leu Val Tyr Ser Met Pro
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Ser Arg Asn Leu Ser Leu Arg Leu Glu Gly Leu Gln Glu Lys Asp
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Lys Ser Arg Gly His Ser Ile Lys Thr Leu Glu Leu Asn Val Leu
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Val Pro Pro Ala Pro Pro Ser Cys Arg Leu Gln Gly Val Pro His
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Val Gly Ala Asn Val Thr Leu Ser Cys Gln Ser Pro Arg Ser Lys
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Pro Ala Val Gln Tyr Gln Trp Asp Arg Gln Leu Pro Ser Phe Gln
          185          190          195

Thr Phe Phe Ala Pro Ala Leu Asp Val Ile Arg Gly Ser Leu Ser
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Leu Thr Asn Leu Ser Ser Ser Met Ala Gly Val Tyr Val Cys Lys
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Ala His Asn Glu Val Gly Thr Ala Gln Cys Asn Val Thr Leu Glu
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          245          250          255

Gly Thr Leu Val Gly Leu Gly Leu Leu Ala Gly Leu Val Leu Leu
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Tyr His Arg Arg Gly Lys Ala Leu Glu Glu Pro Ala Asn Asp Ile
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Lys Glu Asp Ala Ile Ala Pro Arg Thr Leu Pro Trp Pro Lys Ser
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290

295

300

Ser Asp Thr Ile Ser Lys Asn Gly Thr Leu Ser Ser Val Thr Ser
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Ala Arg Ala Leu Arg Pro Pro His Gly Pro Pro Arg Pro Gly Ala
 320 325 330

Leu Thr Pro Thr Pro Ser Leu Ser Ser Gln Ala Leu Pro Ser Pro
 335 340 345

Arg Leu Pro Thr Thr Asp Gly Ala His Pro Gln Pro Ile Ser Pro
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Ile Pro Gly Gly Val Ser Ser Ser Gly Leu Ser Arg Met Gly Ala
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Val Pro Val Met Val Pro Ala Gln Ser Gln Ala Gly Ser Leu Val
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<211> 24

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<223> Synthetic Oligonucleotide Probe

<400> 41

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<210> 42

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

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<210> 43

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 43

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<210> 44
 <211> 18
 <212> DNA
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<220>
 <223> Synthetic Oligonucleotide Probe

<400> 44
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 35 40 45
 Met Gly Phe Ser Gly Asn Gly Val Thr Ile Cys Glu Asp Asp Asn
 50 55 60
 Glu Cys Gly Asn Leu Thr Gln Ser Cys Gly Glu Asn Ala Asn Cys
 65 70 75
 Thr Asn Thr Glu Gly Ser Tyr Tyr Cys Met Cys Val Pro Gly Phe
 80 85 90

Arg Ser Ser Ser Asn Gln Asp Arg Phe Ile Thr Asn Asp Gly Thr
 95 100 105
 Val Cys Ile Glu Asn Val Asn Ala Asn Cys His Leu Asp Asn Val
 110 115 120
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 125 130 135
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 140 145 150
 Val Thr Asp Leu Ser Pro Thr Asp Ile Ile Thr Tyr Ile Glu Ile
 155 160 165
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 170 175 180
 Ser Ala Lys Asp Thr Leu Ser Asn Ser Thr Leu Thr Glu Phe Val
 185 190 195
 Lys Thr Val Asn Asn Phe Val Gln Arg Asp Thr Phe Val Val Trp
 200 205 210
 Asp Lys Leu Ser Val Asn His Arg Arg Thr His Leu Thr Lys Leu
 215 220 225
 Met His Thr Val Glu Gln Ala Thr Leu Arg Ile Ser Gln Ser Phe
 230 235 240
 Gln Lys Thr Thr Glu Phe Asp Thr Asn Ser Thr Asp Ile Ala Leu
 245 250 255
 Lys Val Phe Phe Phe Asp Ser Tyr Asn Met Lys His Ile His Pro
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 His Met Asn Met Asp Gly Asp Tyr Ile Asn Ile Phe Pro Lys Arg
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 440 445 450
 Phe Phe Ser Glu Ile Gln Ser Thr Arg Thr Thr Ile His Lys Asn
 455 460 465
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 485 490 495
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 515 520 525
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tgcatttttta tattataaga gtattggtcc ctttgctttc atcatctgac 150
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tatatgaact tgaaaaaata acatttacat taagtcatcg aaaggtcaca 300
gataggata ggagtctatg tggcattttg gaatactcac ctgataccat 350
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<400> 52
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<211> 18
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<220>
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<400> 54
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<210> 55
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<220>
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<400> 55
ggatctcctg agctcagg 18

<210> 56
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 35 40 45
 His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu
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 Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser
 65 70 75
 Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
 80 85 90
 Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
 95 100 105
 Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
 110 115 120
 Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
 125 130 135
 Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
 140 145 150
 Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe
 155 160 165
 Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg
 170 175 180
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<211> 42

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<210> 62

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

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<400> 62

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<210> 63

<211> 1295

<212> DNA

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P1618P2C2.txt

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 35 40 45
 Ala Ile Leu Ala Cys Lys Thr Pro Lys Lys Thr Val Ser Ser Arg
 50 55 60
 Leu Glu Trp Lys Lys Leu Gly Arg Ser Val Ser Phe Val Tyr Tyr
 65 70 75
 Gln Gln Thr Leu Gln Gly Asp Phe Lys Asn Arg Ala Glu Met Ile
 80 85 90
 Asp Phe Asn Ile Arg Ile Lys Asn Val Thr Arg Ser Asp Ala Gly
 95 100 105
 Lys Tyr Arg Cys Glu Val Ser Ala Pro Ser Glu Gln Gly Gln Asn
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 140 145 150
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 155 160 165

P1618P2C2.txt

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| Leu | Gly | Ser | Gln | Ser | Thr | Asn | Ser | Ser | Tyr | Thr | Met | Asn | Thr | Lys | |
| | | | | 185 | | | | | 190 | | | | | 195 | |
| Thr | Gly | Thr | Leu | Gln | Phe | Asn | Thr | Val | Ser | Lys | Leu | Asp | Thr | Gly | |
| | | | | 200 | | | | | 205 | | | | | 210 | |
| Glu | Tyr | Ser | Cys | Glu | Ala | Arg | Asn | Ser | Val | Gly | Tyr | Arg | Arg | Cys | |
| | | | | 215 | | | | | 220 | | | | | 225 | |
| Pro | Gly | Lys | Arg | Met | Gln | Val | Asp | Asp | Leu | Asn | Ile | Ser | Gly | Ile | |
| | | | | 230 | | | | | 235 | | | | | 240 | |
| Ile | Ala | Ala | Val | Val | Val | Ala | Leu | Val | Ile | Ser | Val | Cys | Gly | | |
| | | | | 245 | | | | 250 | | | | | 255 | | |
| Leu | Gly | Val | Cys | Tyr | Ala | Gln | Arg | Lys | Gly | Tyr | Phe | Ser | Lys | Glu | |
| | | | | 260 | | | | | 265 | | | | | 270 | |
| Thr | Ser | Phe | Gln | Lys | Ser | Asn | Ser | Ser | Ser | Lys | Ala | Thr | Thr | Met | |
| | | | | 275 | | | | | 280 | | | | | 285 | |
| Ser | Glu | Asn | Val | Gln | Trp | Leu | Thr | Pro | Val | Ile | Pro | Ala | Leu | Trp | |
| | | | | 290 | | | | | 295 | | | | | 300 | |
| Lys | Ala | Ala | Ala | Gly | Gly | Ser | Arg | Gly | Gln | Glu | Phe | | | | |
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<211> 23

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 66

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<210> 67

<211> 48

<212> DNA

<213> Artificial Sequence

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P1618P2C2.txt

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<211> 708

<212> PRT

<213> Homo Sapien

<400> 69

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| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Thr | Thr | Leu | Val | Gln | Ala | Val | Asp | Lys | Lys | Val | Asp | Cys | Pro |
| | | | 20 | | | | | | 25 | | | | | 30 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Cys | Thr | Cys | Glu | Ile | Arg | Pro | Trp | Phe | Thr | Pro | Arg | Ser |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

35

40

45

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Leu Thr Phe Pro Ala Arg Leu Pro Ala Asn Thr Gln Ile Leu Leu
65 70 75

Leu Gln Thr Asn Asn Ile Ala Lys Ile Glu Tyr Ser Thr Asp Phe
80 85 90

Pro Val Asn Leu Thr Gly Leu Asp Leu Ser Gln Asn Asn Leu Ser
95 100 105

Ser Val Thr Asn Ile Asn Val Lys Lys Met Pro Gln Leu Leu Ser
110 115 120

Val Tyr Leu Glu Glu Asn Lys Leu Thr Glu Leu Pro Glu Lys Cys
125 130 135

Leu Ser Glu Leu Ser Asn Leu Gln Glu Leu Tyr Ile Asn His Asn
140 145 150

Leu Leu Ser Thr Ile Ser Pro Gly Ala Phe Ile Gly Leu His Asn
155 160 165

Leu Leu Arg Leu His Leu Asn Ser Asn Arg Leu Gln Met Ile Asn
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Ser Lys Trp Phe Asp Ala Leu Pro Asn Leu Glu Ile Leu Met Ile
185 190 195

Gly Glu Asn Pro Ile Ile Arg Ile Lys Asp Met Asn Phe Lys Pro
200 205 210

Leu Ile Asn Leu Arg Ser Leu Val Ile Ala Gly Ile Asn Leu Thr
215 220 225

Glu Ile Pro Asp Asn Ala Leu Val Gly Leu Glu Asn Leu Glu Ser
230 235 240

Ile Ser Phe Tyr Asp Asn Arg Leu Ile Lys Val Pro His Val Ala
245 250 255

Leu Gln Lys Val Val Asn Leu Lys Phe Leu Asp Leu Asn Lys Asn
260 265 270

Pro Ile Asn Arg Ile Arg Arg Gly Asp Phe Ser Asn Met Leu His
275 280 285

Leu Lys Glu Leu Gly Ile Asn Asn Met Pro Glu Leu Ile Ser Ile
290 295 300

Asp Ser Leu Ala Val Asp Asn Leu Pro Asp Leu Arg Lys Ile Glu
305 310 315

Ala Thr Asn Asn Pro Arg Leu Ser Tyr Ile His Pro Asn Ala Phe
320 325 330

Phe Arg Leu Pro Lys Leu Glu Ser Leu Met Leu Asn Ser Asn Ala
335 340 345

Leu Ser Ala Leu Tyr His Gly Thr Ile Glu Ser Leu Pro Asn Leu
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350

355

360

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665

P1618P2C2.txt

670

675

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<212> DNA

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 <211> 259
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| Met | Asn | Leu | Val | Asp | Leu | Trp | Leu | Thr | Arg | Ser | Leu | Ser | Met | Cys | 1 | 5 | 10 | 15 |
| Leu | Leu | Leu | Gln | Ser | Phe | Val | Leu | Met | Ile | Leu | Cys | Phe | His | Ser | 20 | 25 | 30 | |
| Ala | Ser | Met | Cys | Pro | Lys | Gly | Cys | Leu | Cys | Ser | Ser | Ser | Gly | Gly | 35 | 40 | 45 | |
| Leu | Asn | Val | Thr | Cys | Ser | Asn | Ala | Asn | Leu | Lys | Glu | Ile | Pro | Arg | 50 | 55 | 60 | |
| Asp | Leu | Pro | Pro | Glu | Thr | Val | Leu | Leu | Tyr | Leu | Asp | Ser | Asn | Gln | 65 | 70 | 75 | |
| Ile | Thr | Ser | Ile | Pro | Asn | Glu | Ile | Phe | Lys | Asp | Leu | His | Gln | Leu | 80 | 85 | 90 | |
| Arg | Val | Leu | Asn | Leu | Ser | Lys | Asn | Gly | Ile | Glu | Phe | Ile | Asp | Glu | 95 | 100 | 105 | |
| His | Ala | Phe | Lys | Gly | Val | Ala | Glu | Thr | Leu | Gln | Thr | Leu | Asp | Leu | 110 | 115 | 120 | |
| Ser | Asp | Asn | Arg | Ile | Gln | Ser | Val | His | Lys | Asn | Ala | Phe | Asn | Asn | 125 | 130 | 135 | |
| Leu | Lys | Ala | Arg | Ala | Arg | Ile | Ala | Asn | Asn | Pro | Trp | His | Cys | Asp | 140 | 145 | 150 | |
| Cys | Thr | Leu | Gln | Gln | Val | Leu | Arg | Ser | Met | Ala | Ser | Asn | His | Glu | 155 | 160 | 165 | |
| Thr | Ala | His | Asn | Val | Ile | Cys | Lys | Thr | Ser | Val | Leu | Asp | Glu | His | 170 | 175 | 180 | |
| Ala | Gly | Arg | Pro | Phe | Leu | Asn | Ala | Ala | Asn | Asp | Ala | Asp | Leu | Cys | 185 | 190 | 195 | |
| Asn | Leu | Pro | Lys | Lys | Thr | Thr | Asp | Tyr | Ala | Met | Leu | Val | Thr | Met | 200 | 205 | 210 | |
| Phe | Gly | Trp | Phe | Thr | Met | Val | Ile | Ser | Tyr | Val | Val | Tyr | Tyr | Val | 215 | 220 | 225 | |
| Arg | Gln | Asn | Gln | Glu | Asp | Ala | Arg | Arg | His | Leu | Glu | Tyr | Leu | Lys | 230 | 235 | 240 | |
| Ser | Leu | Pro | Ser | Arg | Gln | Lys | Lys | Ala | Asp | Glu | Pro | Asp | Asp | Ile | | | | |

Ser Thr Val Val

<210> 72
<211> 2290
<212> DNA
<213> Homo Sapien

<400> 72
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gcagcccatc ctctgtctgg tgctgggctc agtgctgtca ggctcggcca 150
cgggctgccc gccccgctgc gagtgtccg cccaggaccg cgctgtgctg 200
tgccaccgca agtgctttgt ggcagtcccc gagggcatcc ccaccgagac 250
gcgcctgctg gacctaggca agaaccgat caaaacgctc aaccaggacg 300
agttcgccag cttcccgcac ctggaggagc tggagctcaa cgagaacatc 350
gtgagcgccg tggagcccgg cgccttcaac aacctcttca acctccggac 400
gctgggtctc gcgagcaacc gcctgaagct catcccgcta ggcgtcttca 450
ctggcctcag caacctgacc aagcaggaca tcagcgagaa caagatcggt 500
atcctactgg actacatggt tcaggacctg tacaacctca agtcactgga 550
ggttggcgac aatgacctg tctacatctc tcaccgcgcc ttcagcggcc 600
tcaacagcct ggagcagctg acgctggaga aatgcaacct gacctccatc 650
cccaccgagg cgctgtccca cctgcacggc ctcatcgctc tgaggctccg 700
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gactcaaggt cttggagatc tccactggc cctacttga caccatgaca 800
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ttcaaggact tccctgatgt gctactgccc aactacttca cctgccgccc 1300

cgcccgcatc cgggaccgca agggcccagca ggtgtttgtg gacgagggcc 1350
 acacggtgca gtttgtgtgc cgggccgatg gcgacccgcc gcccgccatc 1400
 ctctggctct caccgccaaa gcacctggtc tcagccaaga gcaatgggcg 1450
 gctcacagtc ttccctgatg gcacgctgga ggtgcgctac gcccgagtac 1500
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 accgacacgc ggcagagtca ataattcaat aaaaaagtta cgaactttct 2200
 ctgtaacttg ggtttcaata attatggatt tttatgaaaa cttgaaataa 2250
 taaaaagaga aaaaaactaa aaaaaaaaaa aaaaaaaaaa 2290

<210> 73

<211> 620

<212> PRT

<213> Homo Sapien

<400> 73

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Pro Ser Pro Leu Leu Ala Cys Trp Gln Pro Ile Leu Leu Leu Val
 20 25 30

Leu Gly Ser Val Leu Ser Gly Ser Ala Thr Gly Cys Pro Pro Arg
 35 40 45

Cys Glu Cys Ser Ala Gln Asp Arg Ala Val Leu Cys His Arg Lys
 50 55 60

Cys Phe Val Ala Val Pro Glu Gly Ile Pro Thr Glu Thr Arg Leu
 65 70 75

Leu Asp Leu Gly Lys Asn Arg Ile Lys Thr Leu Asn Gln Asp Glu
 80 85 90

P1618P2C2.txt

Phe Ala Ser Phe Pro His Leu Glu Glu Leu Glu Leu Asn Glu Asn
 95 100 105
 Ile Val Ser Ala Val Glu Pro Gly Ala Phe Asn Asn Leu Phe Asn
 110 115 120
 Leu Arg Thr Leu Gly Leu Arg Ser Asn Arg Leu Lys Leu Ile Pro
 125 130 135
 Leu Gly Val Phe Thr Gly Leu Ser Asn Leu Thr Lys Gln Asp Ile
 140 145 150
 Ser Glu Asn Lys Ile Val Ile Leu Leu Asp Tyr Met Phe Gln Asp
 155 160 165
 Leu Tyr Asn Leu Lys Ser Leu Glu Val Gly Asp Asn Asp Leu Val
 170 175 180
 Tyr Ile Ser His Arg Ala Phe Ser Gly Leu Asn Ser Leu Glu Gln
 185 190 195
 Leu Thr Leu Glu Lys Cys Asn Leu Thr Ser Ile Pro Thr Glu Ala
 200 205 210
 Leu Ser His Leu His Gly Leu Ile Val Leu Arg Leu Arg His Leu
 215 220 225
 Asn Ile Asn Ala Ile Arg Asp Tyr Ser Phe Lys Arg Leu Tyr Arg
 230 235 240
 Leu Lys Val Leu Glu Ile Ser His Trp Pro Tyr Leu Asp Thr Met
 245 250 255
 Thr Pro Asn Cys Leu Tyr Gly Leu Asn Leu Thr Ser Leu Ser Ile
 260 265 270
 Thr His Cys Asn Leu Thr Ala Val Pro Tyr Leu Ala Val Arg His
 275 280 285
 Leu Val Tyr Leu Arg Phe Leu Asn Leu Ser Tyr Asn Pro Ile Ser
 290 295 300
 Thr Ile Glu Gly Ser Met Leu His Glu Leu Leu Arg Leu Gln Glu
 305 310 315
 Ile Gln Leu Val Gly Gly Gln Leu Ala Val Val Glu Pro Tyr Ala
 320 325 330
 Phe Arg Gly Leu Asn Tyr Leu Arg Val Leu Asn Val Ser Gly Asn
 335 340 345
 Gln Leu Thr Thr Leu Glu Glu Ser Val Phe His Ser Val Gly Asn
 350 355 360
 Leu Glu Thr Leu Ile Leu Asp Ser Asn Pro Leu Ala Cys Asp Cys
 365 370 375
 Arg Leu Leu Trp Val Phe Arg Arg Arg Trp Arg Leu Asn Phe Asn
 380 385 390
 Arg Gln Gln Pro Thr Cys Ala Thr Pro Glu Phe Val Gln Gly Lys
 395 400 405

P1618P2C2.txt

Glu Phe Lys Asp Phe Pro Asp Val Leu Leu Pro Asn Tyr Phe Thr
410 415 420
Cys Arg Arg Ala Arg Ile Arg Asp Arg Lys Ala Gln Gln Val Phe
425 430 435
Val Asp Glu Gly His Thr Val Gln Phe Val Cys Arg Ala Asp Gly
440 445 450
Asp Pro Pro Pro Ala Ile Leu Trp Leu Ser Pro Arg Lys His Leu
455 460 465
Val Ser Ala Lys Ser Asn Gly Arg Leu Thr Val Phe Pro Asp Gly
470 475 480
Thr Leu Glu Val Arg Tyr Ala Gln Val Gln Asp Asn Gly Thr Tyr
485 490 495
Leu Cys Ile Ala Ala Asn Ala Gly Gly Asn Asp Ser Met Pro Ala
500 505 510
His Leu His Val Arg Ser Tyr Ser Pro Asp Trp Pro His Gln Pro
515 520 525
Asn Lys Thr Phe Ala Phe Ile Ser Asn Gln Pro Gly Glu Gly Glu
530 535 540
Ala Asn Ser Thr Arg Ala Thr Val Pro Phe Pro Phe Asp Ile Lys
545 550 555
Thr Leu Ile Ile Ala Thr Thr Met Gly Phe Ile Ser Phe Leu Gly
560 565 570
Val Val Leu Phe Cys Leu Val Leu Leu Phe Leu Trp Ser Arg Gly
575 580 585
Lys Gly Asn Thr Lys His Asn Ile Glu Ile Glu Tyr Val Pro Arg
590 595 600
Lys Ser Asp Ala Gly Ile Ser Ser Ala Asp Ala Pro Arg Lys Phe
605 610 615
Asn Met Lys Met Ile
620

<210> 74
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 74
tcacctggag cctttattgg cc 22

<210> 75
<211> 23
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 75

ataccagcta taaccaggct gcg 23

<210> 76

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 76

caacagtaag tggtttgatg ctcttccaaa tctagagatt ctgatgattg 50

gg 52

<210> 77

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 77

ccatgtgtct cctcctacaa ag 22

<210> 78

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 78

gggaatagat gtgatctgat tgg 23

<210> 79

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 79

cacctgtagc aatgcaaatc tcaaggaaat acctagagat cttcctcctg 50

<210> 80

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 80

agcaaccgcc tgaagctcat cc 22

<210> 81

<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 81
aaggcgcggt gaaagatgta gacg 24

<210> 82
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 82
gactacatgt ttcaggacct gtacaacctc aagtcactgg aggttggcga 50

<210> 83
<211> 1685
<212> DNA
<213> Homo Sapien

<400> 83
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ctttcgggtca acatcgtagt ccacccccctc cccatcccca gccccgggg 100
attcaggctc gccagcgcgc agccagggag ccggccggga agcgcgatgg 150
gggccccagc cgcctcgtc ctgctcctgc tcctgctgtt cgcctgctgc 200
tgggcgcccc gcggggcca cctctcccag gacgacagcc agccctggac 250
atctgatgaa acagtgggtg ctggtggcac cgtggtgctc aagtgccaa 300
tgaaagatca cgaggactca tccctgcaat ggtctaacc tgctcagcag 350
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cactggttat aaatcttcat tacgggaaaa agacacagcc accctaaact 600
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taaaaccttc actgtcagca gctcgggtgac attccagggt acccgggagg 750
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aaggagggca gtgtgccacc cctgaagatg acccaggaga gtgccctgat 1000
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<210> 84

<211> 398

<212> PRT

<213> Homo Sapien

<400> 84

Met Gly Ala Pro Ala Ala Ser Leu Leu Leu Leu Leu Phe
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20 25 30
Ser Gln Pro Trp Thr Ser Asp Glu Thr Val Val Ala Gly Gly Thr
35 40 45
Val Val Leu Lys Cys Gln Val Lys Asp His Glu Asp Ser Ser Leu
50 55 60
Gln Trp Ser Asn Pro Ala Gln Gln Thr Leu Tyr Phe Gly Glu Lys
65 70 75
Arg Ala Leu Arg Asp Asn Arg Ile Gln Leu Val Thr Ser Thr Pro
80 85 90
His Glu Leu Ser Ile Ser Ile Ser Asn Val Ala Leu Ala Asp Glu
95 100 105
Gly Glu Tyr Thr Cys Ser Ile Phe Thr Met Pro Val Arg Thr Ala
110 115 120
Lys Ser Leu Val Thr Val Leu Gly Ile Pro Gln Lys Pro Ile Ile

125

130

135

Thr Gly Tyr Lys Ser Ser Leu Arg Glu Lys Asp Thr Ala Thr Leu
 140 145 150

Asn Cys Gln Ser Ser Gly Ser Lys Pro Ala Ala Arg Leu Thr Trp
 155 160 165

Arg Lys Gly Asp Gln Glu Leu His Gly Glu Pro Thr Arg Ile Gln
 170 175 180

Glu Asp Pro Asn Gly Lys Thr Phe Thr Val Ser Ser Ser Val Thr
 185 190 195

Phe Gln Val Thr Arg Glu Asp Asp Gly Ala Ser Ile Val Cys Ser
 200 205 210

Val Asn His Glu Ser Leu Lys Gly Ala Asp Arg Ser Thr Ser Gln
 215 220 225

Arg Ile Glu Val Leu Tyr Thr Pro Thr Ala Met Ile Arg Pro Asp
 230 235 240

Pro Pro His Pro Arg Glu Gly Gln Lys Leu Leu Leu His Cys Glu
 245 250 255

Gly Arg Gly Asn Pro Val Pro Gln Gln Tyr Leu Trp Glu Lys Glu
 260 265 270

Gly Ser Val Pro Pro Leu Lys Met Thr Gln Glu Ser Ala Leu Ile
 275 280 285

Phe Pro Phe Leu Asn Lys Ser Asp Ser Gly Thr Tyr Gly Cys Thr
 290 295 300

Ala Thr Ser Asn Met Gly Ser Tyr Lys Ala Tyr Tyr Thr Leu Asn
 305 310 315

Val Asn Asp Pro Ser Pro Val Pro Ser Ser Ser Ser Thr Tyr His
 320 325 330

Ala Ile Ile Gly Gly Ile Val Ala Phe Ile Val Phe Leu Leu Leu
 335 340 345

Ile Met Leu Ile Phe Leu Gly His Tyr Leu Ile Arg His Lys Gly
 350 355 360

Thr Tyr Leu Thr His Glu Ala Lys Gly Ser Asp Asp Ala Pro Asp
 365 370 375

Ala Asp Thr Ala Ile Ile Asn Ala Glu Gly Gly Gln Ser Gly Gly
 380 385 390

Asp Asp Lys Lys Glu Tyr Phe Ile
 395

<210> 85

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide Probe

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<210> 86
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 86
aacctggaat gtcaccgagc tg 22

<210> 87
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 87
cctagcacag tgacgaggga cttggc 26

<210> 88
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 88
aagacacagc caccctaaac tgtcagtctt ctgggagcaa gcctgcagcc 50

<210> 89
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Sequence

<400> 89
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<210> 90
<211> 2755
<212> DNA
<213> Homo Sapien

<400> 90
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attgctcgct ttaaaaatgc tgctttggat tctgttgctg gagacgtctc 200
tttgttttgc cgctggaaac gttacagggg acgtttgcaa agagaagatc 250

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 ctgac 2755

<210> 91
 <211> 696
 <212> PRT
 <213> Homo Sapien

<400> 91
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 20 25 30
 Cys Asn Glu Ile Glu Gly Asp Leu His Val Asp Cys Glu Lys Lys
 35 40 45
 Gly Phe Thr Ser Leu Gln Arg Phe Thr Ala Pro Thr Ser Gln Phe
 50 55 60
 Tyr His Leu Phe Leu His Gly Asn Ser Leu Thr Arg Leu Phe Pro
 65 70 75
 Asn Glu Phe Ala Asn Phe Tyr Asn Ala Val Ser Leu His Met Glu
 80 85 90

P1618P2C2.txt

Asn Asn Gly Leu His Glu Ile Val Pro Gly Ala Phe Leu Gly Leu
 95 100 105
 Gln Leu Val Lys Arg Leu His Ile Asn Asn Asn Lys Ile Lys Ser
 110 115 120
 Phe Arg Lys Gln Thr Phe Leu Gly Leu Asp Asp Leu Glu Tyr Leu
 125 130 135
 Gln Ala Asp Phe Asn Leu Leu Arg Asp Ile Asp Pro Gly Ala Phe
 140 145 150
 Gln Asp Leu Asn Lys Leu Glu Val Leu Ile Leu Asn Asp Asn Leu
 155 160 165
 Ile Ser Thr Leu Pro Ala Asn Val Phe Gln Tyr Val Pro Ile Thr
 170 175 180
 His Leu Asp Leu Arg Gly Asn Arg Leu Lys Thr Leu Pro Tyr Glu
 185 190 195
 Glu Val Leu Glu Gln Ile Pro Gly Ile Ala Glu Ile Leu Leu Glu
 200 205 210
 Asp Asn Pro Trp Asp Cys Thr Cys Asp Leu Leu Ser Leu Lys Glu
 215 220 225
 Trp Leu Glu Asn Ile Pro Lys Asn Ala Leu Ile Gly Arg Val Val
 230 235 240
 Cys Glu Ala Pro Thr Arg Leu Gln Gly Lys Asp Leu Asn Glu Thr
 245 250 255
 Thr Glu Gln Asp Leu Cys Pro Leu Lys Asn Arg Val Asp Ser Ser
 260 265 270
 Leu Pro Ala Pro Pro Ala Gln Glu Glu Thr Phe Ala Pro Gly Pro
 275 280 285
 Leu Pro Thr Pro Phe Lys Thr Asn Gly Gln Glu Asp His Ala Thr
 290 295 300
 Pro Gly Ser Ala Pro Asn Gly Gly Thr Lys Ile Pro Gly Asn Trp
 305 310 315
 Gln Ile Lys Ile Arg Pro Thr Ala Ala Ile Ala Thr Gly Ser Ser
 320 325 330
 Arg Asn Lys Pro Leu Ala Asn Ser Leu Pro Cys Pro Gly Gly Cys
 335 340 345
 Ser Cys Asp His Ile Pro Gly Ser Gly Leu Lys Met Asn Cys Asn
 350 355 360
 Asn Arg Asn Val Ser Ser Leu Ala Asp Leu Lys Pro Lys Leu Ser
 365 370 375
 Asn Val Gln Glu Leu Phe Leu Arg Asp Asn Lys Ile His Ser Ile
 380 385 390
 Arg Lys Ser His Phe Val Asp Tyr Lys Asn Leu Ile Leu Leu Asp
 395 400 405

P1618P2C2.txt

Leu Gly Asn Asn Asn Ile Ala Thr Val Glu Asn Asn Thr Phe Lys
 410 415 420
 Asn Leu Leu Asp Leu Arg Trp Leu Tyr Met Asp Ser Asn Tyr Leu
 425 430 435
 Asp Thr Leu Ser Arg Glu Lys Phe Ala Gly Leu Gln Asn Leu Glu
 440 445 450
 Tyr Leu Asn Val Glu Tyr Asn Ala Ile Gln Leu Ile Leu Pro Gly
 455 460 465
 Thr Phe Asn Ala Met Pro Lys Leu Arg Ile Leu Ile Leu Asn Asn
 470 475 480
 Asn Leu Leu Arg Ser Leu Pro Val Asp Val Phe Ala Gly Val Ser
 485 490 495
 Leu Ser Lys Leu Ser Leu His Asn Asn Tyr Phe Met Tyr Leu Pro
 500 505 510
 Val Ala Gly Val Leu Asp Gln Leu Thr Ser Ile Ile Gln Ile Asp
 515 520 525
 Leu His Gly Asn Pro Trp Glu Cys Ser Cys Thr Ile Val Pro Phe
 530 535 540
 Lys Gln Trp Ala Glu Arg Leu Gly Ser Glu Val Leu Met Ser Asp
 545 550 555
 Leu Lys Cys Glu Thr Pro Val Asn Phe Phe Arg Lys Asp Phe Met
 560 565 570
 Leu Leu Ser Asn Asp Glu Ile Cys Pro Gln Leu Tyr Ala Arg Ile
 575 580 585
 Ser Pro Thr Leu Thr Ser His Ser Lys Asn Ser Thr Gly Leu Ala
 590 595 600
 Glu Thr Gly Thr His Ser Asn Ser Tyr Leu Asp Thr Ser Arg Val
 605 610 615
 Ser Ile Ser Val Leu Val Pro Gly Leu Leu Leu Val Phe Val Thr
 620 625 630
 Ser Ala Phe Thr Val Val Gly Met Leu Val Phe Ile Leu Arg Asn
 635 640 645
 Arg Lys Arg Ser Lys Arg Arg Asp Ala Asn Ser Ser Ala Ser Glu
 650 655 660
 Ile Asn Ser Leu Gln Thr Val Cys Asp Ser Ser Tyr Trp His Asn
 665 670 675
 Gly Pro Tyr Asn Ala Asp Gly Ala His Arg Val Tyr Asp Cys Gly
 680 685 690
 Ser His Ser Leu Ser Asp
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<210> 92
 <211> 22

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 92
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<210> 93
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 93
 attgttgtgc aggctgagtt taag 24

<210> 94
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 94
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<210> 95
 <211> 2226
 <212> DNA
 <213> Homo Sapien

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 ataactcagg gctgcaccgg gcctggcagc gctccgcaca catttcctgt 100
 cgcggcctaa gggaaactgt tggccgctgg gcccgcgggg ggattcttgg 150
 cagttggggg gtccgtcggg agcgagggcg gaggggaagg gagggggaac 200
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aggaacttac ttgtgtaact gacaatttct gcagaaatcc cccttcctct 1900
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cctgatgata gaggaagtgg aagtcctttt aggatggtga tactggggga 2000
ccgggtagtg ctggggagag atattttctt atgtttattc ggagaatttg 2050
gagaagtgat tgaacttttc aagacattgg aaacaaatag aacacaatat 2100
aatttacatt aaaaaataat ttctaccaa atggaaagga aatgttctat 2150
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aaataaaaaa ttaaaggatt gttgat 2226

<210> 96
 <211> 490
 <212> PRT
 <213> Homo Sapien

<400> 96
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 20 25 30
 Cys Ser Ala Ser Gly Ala Cys Tyr Ser Leu His His Ala Thr Met
 35 40 45
 Lys Arg Gln Ala Ala Glu Glu Ala Cys Ile Leu Arg Gly Gly Ala
 50 55 60
 Leu Ser Thr Val Arg Ala Gly Ala Glu Leu Arg Ala Val Leu Ala
 65 70 75
 Leu Leu Arg Ala Gly Pro Gly Pro Gly Gly Gly Ser Lys Asp Leu
 80 85 90
 Leu Phe Trp Val Ala Leu Glu Arg Arg Arg Ser His Cys Thr Leu
 95 100 105
 Glu Asn Glu Pro Leu Arg Gly Phe Ser Trp Leu Ser Ser Asp Pro
 110 115 120
 Gly Gly Leu Glu Ser Asp Thr Leu Gln Trp Val Glu Glu Pro Gln
 125 130 135
 Arg Ser Cys Thr Ala Arg Arg Cys Ala Val Leu Gln Ala Thr Gly
 140 145 150
 Gly Val Glu Pro Ala Gly Trp Lys Glu Met Arg Cys His Leu Arg
 155 160 165
 Ala Asn Gly Tyr Leu Cys Lys Tyr Gln Phe Glu Val Leu Cys Pro
 170 175 180
 Ala Pro Arg Pro Gly Ala Ala Ser Asn Leu Ser Tyr Arg Ala Pro
 185 190 195
 Phe Gln Leu His Ser Ala Ala Leu Asp Phe Ser Pro Pro Gly Thr
 200 205 210
 Glu Val Ser Ala Leu Cys Arg Gly Gln Leu Pro Ile Ser Val Thr
 215 220 225
 Cys Ile Ala Asp Glu Ile Gly Ala Arg Trp Asp Lys Leu Ser Gly
 230 235 240
 Asp Val Leu Cys Pro Cys Pro Gly Arg Tyr Leu Arg Ala Gly Lys
 245 250 255
 Cys Ala Glu Leu Pro Asn Cys Leu Asp Asp Leu Gly Gly Phe Ala
 260 265 270
 Cys Glu Cys Ala Thr Gly Phe Glu Leu Gly Lys Asp Gly Arg Ser
 275 280 285

P1618P2C2.txt

Cys Val Thr Ser Gly Glu Gly Gln Pro Thr Leu Gly Gly Thr Gly
 290 295 300
 Val Pro Thr Arg Arg Pro Pro Ala Thr Ala Thr Ser Pro Val Pro
 305 310 315
 Gln Arg Thr Trp Pro Ile Arg Val Asp Glu Lys Leu Gly Glu Thr
 320 325 330
 Pro Leu Val Pro Glu Gln Asp Asn Ser Val Thr Ser Ile Pro Glu
 335 340 345
 Ile Pro Arg Trp Gly Ser Gln Ser Thr Met Ser Thr Leu Gln Met
 350 355 360
 Ser Leu Gln Ala Glu Ser Lys Ala Thr Ile Thr Pro Ser Gly Ser
 365 370 375
 Val Ile Ser Lys Phe Asn Ser Thr Thr Ser Ser Ala Thr Pro Gln
 380 385 390
 Ala Phe Asp Ser Ser Ser Ala Val Val Phe Ile Phe Val Ser Thr
 395 400 405
 Ala Val Val Val Leu Val Ile Leu Thr Met Thr Val Leu Gly Leu
 410 415 420
 Val Lys Leu Cys Phe His Glu Ser Pro Ser Ser Gln Pro Arg Lys
 425 430 435
 Glu Ser Met Gly Pro Pro Gly Leu Glu Ser Asp Pro Glu Pro Ala
 440 445 450
 Ala Leu Gly Ser Ser Ser Ala His Cys Thr Asn Asn Gly Val Lys
 455 460 465
 Val Gly Asp Cys Asp Leu Arg Asp Arg Ala Glu Gly Ala Leu Leu
 470 475 480
 Ala Glu Ser Pro Leu Gly Ser Ser Asp Ala
 485 490

<210> 97

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 97

tggaaggaga tgcgatgcca cctg 24

<210> 98

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 98

tgaccagtgg ggaaggacag 20

<210> 99
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 99
 acagagcaga gggcgccttg 20

<210> 100
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 100
 tcagggacaa gtggtgtctc tccc 24

<210> 101
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 101
 tcaggaagg agtgtgcagt tctg 24

<210> 102
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 102
 acagctcccg atctcagtta ctgcatcgc ggacgaaatc ggcgctcgct 50

<210> 103
 <211> 2026
 <212> DNA
 <213> Homo Sapien

<400> 103
 cggacgcgtg ggattcagca gtggcctgtg gctgccagag cagctcctca 50
 ggggaaacta agcgtcgagt cagacggcac cataatcgcc tttaaaagtg 100
 cctccgccct gccggccgcg tatcccccg ctacctgggc cgccccgcgg 150
 cggcgcgcgc gtgagagggg gcgcgcgggc agccgagcgc cggcgtgagc 200
 cagcgtgct gccagtgtga gcggcggtgt gagcgcggtg ggtgcggagg 250
 ggcgtgtgtg ccggcgcgcg cgccgtgggg tgcaaacccc gagcgtctac 300

gctgccatga gggg'gcgaa cgcctggg'cg ccactctgcc tgctgctggc 350
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catgtggtgg cattcttact ggagagtctg gatttattgg cagtgaaggt 450
tttcctggag tgtaccctcc aaatagcaaa tgtacttggg aaatcacagt 500
tcccgaagga aaagtagtcg ttctcaattt ccgattcata gacctcgaga 550
gtgacaacct gtgccgctat gactttgtgg atgtgtacaa tggccatgcc 600
aatggccagc gcattggccg cttctgtggc actttccggc ctggagccct 650
tgtgtccagt ggcaacaaga tgatggtgca gatgatttct gatgccaaca 700
cagctggcaa tggcttcatg gccatgttct ccgctgctga accaaacgaa 750
agagggg'atc agtattgtgg aggactcctt gacagacctt ccggctcttt 800
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gtttaatggc ggggaagtca acgatgctag aagaattgga aagtattgtg 1000
gtgatagtcc acctgcgcca attgtgtctg agagaaatga acttcttatt 1050
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catattcagg ccaaaaaaac tgcctacaac tacagaacag cctgtcacca 1150
ccacattccc tgtaaccacg ggtttaaaac ccaccgtggc cttgtgtcaa 1200
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ttaacagtga actgtgtcca tttaagctgt attctgccat tgcctttgaa 1600
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gtaaaaggat attttagaat tgagttgtgt gaagatgtca aaaaaagatt 1900
 ttagaagtgc aatatttata gtgttatttg tttcaccttc aagcctttgc 1950
 cctgaggtgt tacaatcttg tcttgcgttt tctaaatcaa tgcttaataa 2000
 aatattttta aaggaaaaaa aaaaaa 2026

<210> 104
 <211> 415
 <212> PRT
 <213> Homo Sapien

<400> 104

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Arg | Gly | Ala | Asn | Ala | Trp | Ala | Pro | Leu | Cys | Leu | Leu | Leu | Ala | 1 | 5 | 10 | 15 |
| Ala | Ala | Thr | Gln | Leu | Ser | Arg | Gln | Gln | Ser | Pro | Glu | Arg | Pro | Val | 20 | 25 | 30 | |
| Phe | Thr | Cys | Gly | Gly | Ile | Leu | Thr | Gly | Glu | Ser | Gly | Phe | Ile | Gly | 35 | 40 | 45 | |
| Ser | Glu | Gly | Phe | Pro | Gly | Val | Tyr | Pro | Pro | Asn | Ser | Lys | Cys | Thr | 50 | 55 | 60 | |
| Trp | Lys | Ile | Thr | Val | Pro | Glu | Gly | Lys | Val | Val | Val | Leu | Asn | Phe | 65 | 70 | 75 | |
| Arg | Phe | Ile | Asp | Leu | Glu | Ser | Asp | Asn | Leu | Cys | Arg | Tyr | Asp | Phe | 80 | 85 | 90 | |
| Val | Asp | Val | Tyr | Asn | Gly | His | Ala | Asn | Gly | Gln | Arg | Ile | Gly | Arg | 95 | 100 | 105 | |
| Phe | Cys | Gly | Thr | Phe | Arg | Pro | Gly | Ala | Leu | Val | Ser | Ser | Gly | Asn | 110 | 115 | 120 | |
| Lys | Met | Met | Val | Gln | Met | Ile | Ser | Asp | Ala | Asn | Thr | Ala | Gly | Asn | 125 | 130 | 135 | |
| Gly | Phe | Met | Ala | Met | Phe | Ser | Ala | Ala | Glu | Pro | Asn | Glu | Arg | Gly | 140 | 145 | 150 | |
| Asp | Gln | Tyr | Cys | Gly | Gly | Leu | Leu | Asp | Arg | Pro | Ser | Gly | Ser | Phe | 155 | 160 | 165 | |
| Lys | Thr | Pro | Asn | Trp | Pro | Asp | Arg | Asp | Tyr | Pro | Ala | Gly | Val | Thr | 170 | 175 | 180 | |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Val | Trp | His | Ile | Val | Ala | Pro | Lys | Asn | Gln | Leu | Ile | Glu | Leu | 185 | 190 | 195 |
| Lys | Phe | Glu | Lys | Phe | Asp | Val | Glu | Arg | Asp | Asn | Tyr | Cys | Arg | Tyr | 200 | 205 | 210 |
| Asp | Tyr | Val | Ala | Val | Phe | Asn | Gly | Gly | Glu | Val | Asn | Asp | Ala | Arg | 215 | 220 | 225 |
| Arg | Ile | Gly | Lys | Tyr | Cys | Gly | Asp | Ser | Pro | Pro | Ala | Pro | Ile | Val | 230 | 235 | 240 |

Ser Glu Arg Asn Glu Leu Leu Ile Gln Phe Leu Ser Asp Leu Ser

245

250

255

Leu Thr Ala Asp Gly Phe Ile Gly His Tyr Ile Phe Arg Pro Lys
 260 265 270
 Lys Leu Pro Thr Thr Thr Glu Gln Pro Val Thr Thr Thr Phe Pro
 275 280 285
 Val Thr Thr Gly Leu Lys Pro Thr Val Ala Leu Cys Gln Gln Lys
 290 295 300
 Cys Arg Arg Thr Gly Thr Leu Glu Gly Asn Tyr Cys Ser Ser Asp
 305 310 315
 Phe Val Leu Ala Gly Thr Val Ile Thr Thr Ile Thr Arg Asp Gly
 320 325 330
 Ser Leu His Ala Thr Val Ser Ile Ile Asn Ile Tyr Lys Glu Gly
 335 340 345
 Asn Leu Ala Ile Gln Gln Ala Gly Lys Asn Met Ser Ala Arg Leu
 350 355 360
 Thr Val Val Cys Lys Gln Cys Pro Leu Leu Arg Arg Gly Leu Asn
 365 370 375
 Tyr Ile Ile Met Gly Gln Val Gly Glu Asp Gly Arg Gly Lys Ile
 380 385 390
 Met Pro Asn Ser Phe Ile Met Met Phe Lys Thr Lys Asn Gln Lys
 395 400 405
 Leu Leu Asp Ala Leu Lys Asn Lys Gln Cys
 410 415

<210> 105

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 105

ccgattcata gacctcgaga gt 22

<210> 106

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 106

gtcaaggagt cctccacaat ac 22

<210> 107

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

P1618P2C2.txt
<223> Synthetic Oligonucleotide Probe

<400> 107

gtgtacaatg gccatgccaa tggccagcgc attggccgct tctgt 45

<210> 108

<211> 1838

<212> DNA

<213> Homo Sapien

<400> 108

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agatggcccc atggcccccg aagggcctag tcccagctgt gctctggggc 150
ctcagcctct tctcaacct cccaggacct atctggctcc agccctctcc 200
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gctgtgctca gattccctga agctctgctg ccccgaggc accttcgggc 550
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cagcagatgt tctttggcat catcatctgt gactggcca cgctggctgc 1250
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P1618P2C2.txt

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 cgctgcccc agagcttggg ctgccctcct gctggacact caggacagct 1450
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 gcccaggtac ccaggcccg gcagacaagg cccctggggg aaaaagtagc 1550
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 gctccctcct gccagctgca tgctgccagt tcctgttctg tgttcaccac 1750
 atccccacac ccattgcca cttatttatt catctcagga aataaagaaa 1800
 ggtcttgga agttaaaaaa aaaaaaaaaa aaaaaaaa 1838

<210> 109
 <211> 420
 <212> PRT
 <213> Homo Sapien

<400> 109
 Met Ala Pro Trp Pro Pro Lys Gly Leu Val Pro Ala Val Leu Trp
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 Pro Ser Pro Pro Pro Gln Ser Ser Pro Pro Pro Gln Pro His Pro
 35 40 45
 Cys His Thr Cys Arg Gly Leu Val Asp Ser Phe Asn Lys Gly Leu
 50 55 60
 Glu Arg Thr Ile Arg Asp Asn Phe Gly Gly Gly Asn Thr Ala Trp
 65 70 75
 Glu Glu Glu Asn Leu Ser Lys Tyr Lys Asp Ser Glu Thr Arg Leu
 80 85 90
 Val Glu Val Leu Glu Gly Val Cys Ser Lys Ser Asp Phe Glu Cys
 95 100 105
 His Arg Leu Leu Glu Leu Ser Glu Glu Leu Val Glu Ser Trp Trp
 110 115 120
 Phe His Lys Gln Gln Glu Ala Pro Asp Leu Phe Gln Trp Leu Cys
 125 130 135
 Ser Asp Ser Leu Lys Leu Cys Cys Pro Ala Gly Thr Phe Gly Pro
 140 145 150
 Ser Cys Leu Pro Cys Pro Gly Gly Thr Glu Arg Pro Cys Gly Gly
 155 160 165
 Tyr Gly Gln Cys Glu Gly Glu Gly Thr Arg Gly Gly Ser Gly His
 170 175 180

P1618P2C2.txt

Cys Asp Cys Gln Ala Gly Tyr Gly Gly Glu Ala Cys Gly Gln Cys
 185 190 195
 Gly Leu Gly Tyr Phe Glu Ala Glu Arg Asn Ala Ser His Leu Val
 200 205 210
 Cys Ser Ala Cys Phe Gly Pro Cys Ala Arg Cys Ser Gly Pro Glu
 215 220 225
 Glu Ser Asn Cys Leu Gln Cys Lys Lys Gly Trp Ala Leu His His
 230 235 240
 Leu Lys Cys Val Asp Ile Asp Glu Cys Gly Thr Glu Gly Ala Asn
 245 250 255
 Cys Gly Ala Asp Gln Phe Cys Val Asn Thr Glu Gly Ser Tyr Glu
 260 265 270
 Cys Arg Asp Cys Ala Lys Ala Cys Leu Gly Cys Met Gly Ala Gly
 275 280 285
 Pro Gly Arg Cys Lys Lys Cys Ser Pro Gly Tyr Gln Gln Val Gly
 290 295 300
 Ser Lys Cys Leu Asp Val Asp Glu Cys Glu Thr Glu Val Cys Pro
 305 310 315
 Gly Glu Asn Lys Gln Cys Glu Asn Thr Glu Gly Gly Tyr Arg Cys
 320 325 330
 Ile Cys Ala Glu Gly Tyr Lys Gln Met Glu Gly Ile Cys Val Lys
 335 340 345
 Glu Gln Ile Pro Glu Ser Ala Gly Phe Phe Ser Glu Met Thr Glu
 350 355 360
 Asp Glu Leu Val Val Leu Gln Gln Met Phe Phe Gly Ile Ile Ile
 365 370 375
 Cys Ala Leu Ala Thr Leu Ala Ala Lys Gly Asp Leu Val Phe Thr
 380 385 390
 Ala Ile Phe Ile Gly Ala Val Ala Ala Met Thr Gly Tyr Trp Leu
 395 400 405
 Ser Glu Arg Ser Asp Arg Val Leu Glu Gly Phe Ile Lys Gly Arg
 410 415 420

<210> 110

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide Probe

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cctggctatc agcaggtggg ctccaagtgt ctcgatgtgg atgagtgtga 50

<210> 111

<211> 22

<212> DNA

<213> Artificial Sequence

P1618P2C2.txt

<220>

<223> Synthetic Oligonucleotide Probe

<400> 111

attctgcgtg aacactgagg gc 22

<210> 112

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 112

atctgcttgt agccctcggc ac 22

<210> 113

<211> 1616

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 1461

<223> unknown base

<400> 113

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cagccagagc ttccgagagg tggccggcag gttcctggcg ttggaggcca 350
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P1618P2C2.txt

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aaagtctcc accaccactc tggacctaa acctgggggt aagtgtgggt 1550
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<210> 114

<211> 366

<212> PRT

<213> Homo Sapien

<400> 114

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| Ala | Ser | Pro | Gly | Ala | Ala | Leu | Thr | Gly | Glu | Gln | Leu | Leu | Gly | Ser |
| | | | 20 | | | | | | 25 | | | | | 30 |
| Leu | Leu | Arg | Gln | Leu | Gln | Leu | Lys | Glu | Val | Pro | Thr | Leu | Asp | Arg |
| | | | 35 | | | | | | 40 | | | | | 45 |
| Ala | Asp | Met | Glu | Glu | Leu | Val | Ile | Pro | Thr | His | Val | Arg | Ala | Gln |
| | | | 50 | | | | | | 55 | | | | | 60 |
| Tyr | Val | Ala | Leu | Leu | Gln | Arg | Ser | His | Gly | Asp | Arg | Ser | Arg | Gly |
| | | | 65 | | | | | | 70 | | | | | 75 |
| Lys | Arg | Phe | Ser | Gln | Ser | Phe | Arg | Glu | Val | Ala | Gly | Arg | Phe | Leu |
| | | | 80 | | | | | | 85 | | | | | 90 |
| Ala | Leu | Glu | Ala | Ser | Thr | His | Leu | Leu | Val | Phe | Gly | Met | Glu | Gln |
| | | | 95 | | | | | | 100 | | | | | 105 |
| Arg | Leu | Pro | Pro | Asn | Ser | Glu | Leu | Val | Gln | Ala | Val | Leu | Arg | Leu |
| | | | 110 | | | | | | 115 | | | | | 120 |

Phe Gln Glu Pro Val Pro Lys Ala Ala Leu His Arg His Gly Arg
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 Leu Ser Pro Arg Ser Ala Arg Ala Arg Val Thr Val Glu Trp Leu
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 Arg Val Arg Asp Asp Gly Ser Asn Arg Thr Ser Leu Ile Asp Ser
 155 160 165
 Arg Leu Val Ser Val His Glu Ser Gly Trp Lys Ala Phe Asp Val
 170 175 180
 Thr Glu Ala Val Asn Phe Trp Gln Gln Leu Ser Arg Pro Arg Gln
 185 190 195
 Pro Leu Leu Leu Gln Val Ser Val Gln Arg Glu His Leu Gly Pro
 200 205 210
 Leu Ala Ser Gly Ala His Lys Leu Val Arg Phe Ala Ser Gln Gly
 215 220 225
 Ala Pro Ala Gly Leu Gly Glu Pro Gln Leu Glu Leu His Thr Leu
 230 235 240
 Asp Leu Gly Asp Tyr Gly Ala Gln Gly Asp Cys Asp Pro Glu Ala
 245 250 255
 Pro Met Thr Glu Gly Thr Arg Cys Cys Arg Gln Glu Met Tyr Ile
 260 265 270
 Asp Leu Gln Gly Met Lys Trp Ala Glu Asn Trp Val Leu Glu Pro
 275 280 285
 Pro Gly Phe Leu Ala Tyr Glu Cys Val Gly Thr Cys Arg Gln Pro
 290 295 300
 Pro Glu Ala Leu Ala Phe Lys Trp Pro Phe Leu Gly Pro Arg Gln
 305 310 315
 Cys Ile Ala Ser Glu Thr Asp Ser Leu Pro Met Ile Val Ser Ile
 320 325 330
 Lys Glu Gly Gly Arg Thr Arg Pro Gln Val Val Ser Leu Pro Asn
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 Pro Arg Arg Leu Gln Pro
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<210> 115

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide Probe

<400> 115

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<210> 116

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 116
ataggagttg aagcagcgct gc 22

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<223> Synthetic Oligonucleotide Probe

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<210> 118
<211> 1857
<212> DNA
<213> Homo Sapien

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tggcgatcct gtttgtctcc ctggcattgg gcagtgttac agtgcactct 150
tctgaacctg aagtcagaat tcctgagaat aatcctgtga agttgtcctg 200
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gctgacatgc tcagaacaag atgggtcccc accttctgaa tacacctggg 550
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agtgcgccgaa gtgaaggaga attcaaacag acctcgtcat tcctggtgtg 950
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 agctgctcag gagcctggca acaagagcaa aactccagct caaaaaaaaa 1850
 aaaaaaa 1857

<210> 119

<211> 299

<212> PRT

<213> Homo Sapien

<400> 119

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 Val His Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro
 35 40 45
 Val Lys Leu Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val
 50 55 60
 Glu Trp Lys Phe Asp Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr
 65 70 75
 Asn Asn Lys Ile Thr Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu
 80 85 90

P1618P2C2.txt

Pro Thr Gly Ile Thr Phe Lys Ser Val Thr Arg Glu Asp Thr Gly
95 100 105
Thr Tyr Thr Cys Met Val Ser Glu Glu Gly Gly Asn Ser Tyr Gly
110 115 120
Glu Val Lys Val Lys Leu Ile Val Leu Val Pro Pro Ser Lys Pro
125 130 135
Thr Val Asn Ile Pro Ser Ser Ala Thr Ile Gly Asn Arg Ala Val
140 145 150
Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro Pro Ser Glu Tyr Thr
155 160 165
Trp Phe Lys Asp Gly Ile Val Met Pro Thr Asn Pro Lys Ser Thr
170 175 180
Arg Ala Phe Ser Asn Ser Ser Tyr Val Leu Asn Pro Thr Thr Gly
185 190 195
Glu Leu Val Phe Asp Pro Leu Ser Ala Ser Asp Thr Gly Glu Tyr
200 205 210
Ser Cys Glu Ala Arg Asn Gly Tyr Gly Thr Pro Met Thr Ser Asn
215 220 225
Ala Val Arg Met Glu Ala Val Glu Arg Asn Val Gly Val Ile Val
230 235 240
Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Ile Leu Val Phe
245 250 255
Gly Ile Trp Phe Ala Tyr Ser Arg Gly His Phe Asp Arg Thr Lys
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<210> 120

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 120

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<210> 121

<211> 50

<212> DNA

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<211> 20

<212> DNA

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<223> Synthetic Oligonucleotide Probe

<400> 122

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<210> 123

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 123

taggaagagt tgctgaaggc acgg 24

<210> 124

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 124

ttgccttact caggtgctac 20

<210> 125

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 125

actcagcagt ggtaggaaag 20

<210> 126

<211> 1210

<212> DNA

<213> Homo Sapien

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gctgctcggc ctcggactag gcctggaggc cgccgcgagc ccgctttcca 150

ccccgacctc tgcccaggcc gcaggcccca gctcaggctc gtgcccaccc 200

accaagttcc agtgccgcac cagtggctta tgcgtgcccc tcacctggcg 250

ctgcgacagg gacttggact gcagcgatgg cagcgatgag gaggagtga 300

P1618P2C2.txt

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<210> 127
 <211> 282
 <212> PRT
 <213> Homo Sapien

<400> 127

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Gly | Gly | Trp | Met | Ala | Gln | Val | Gly | Ala | Trp | Arg | Thr | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 |
| Ala | Leu | Gly | Leu | Ala | Leu | Leu | Leu | Leu | Leu | Gly | Leu | Gly | Leu | Gly |
| | | | 20 | | | | | | 25 | | | | | 30 |
| Leu | Glu | Ala | Ala | Ala | Ser | Pro | Leu | Ser | Thr | Pro | Thr | Ser | Ala | Gln |
| | | | 35 | | | | | | 40 | | | | | 45 |
| Ala | Ala | Gly | Pro | Ser | Ser | Gly | Ser | Cys | Pro | Pro | Thr | Lys | Phe | Gln |
| | | | 50 | | | | | | 55 | | | | | 60 |
| Cys | Arg | Thr | Ser | Gly | Leu | Cys | Val | Pro | Leu | Thr | Trp | Arg | Cys | Asp |
| | | | 65 | | | | | | 70 | | | | | 75 |
| Arg | Asp | Leu | Asp | Cys | Ser | Asp | Gly | Ser | Asp | Glu | Glu | Glu | Cys | Arg |
| | | | 80 | | | | | | 85 | | | | | 90 |

Ile Glu Pro Cys Thr Gln Lys Gly Gln Cys Pro Pro Pro Pro Gly
 95 100 105
 Leu Pro Cys Pro Cys Thr Gly Val Ser Asp Cys Ser Gly Gly Thr
 110 115 120
 Asp Lys Lys Leu Arg Asn Cys Ser Arg Leu Ala Cys Leu Ala Gly
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 Glu Leu Arg Cys Thr Leu Ser Asp Asp Cys Ile Pro Leu Thr Trp
 140 145 150
 Arg Cys Asp Gly His Pro Asp Cys Pro Asp Ser Ser Asp Glu Leu
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 Gly Cys Gly Thr Asn Glu Ile Leu Pro Glu Gly Asp Ala Thr Thr
 170 175 180
 Met Gly Pro Pro Val Thr Leu Glu Ser Val Thr Ser Leu Arg Asn
 185 190 195
 Ala Thr Thr Met Gly Pro Pro Val Thr Leu Glu Ser Val Pro Ser
 200 205 210
 Val Gly Asn Ala Thr Ser Ser Ser Ala Gly Asp Gln Ser Gly Ser
 215 220 225
 Pro Thr Ala Tyr Gly Val Ile Ala Ala Ala Ala Val Leu Ser Ala
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 Ser Leu Val Thr Ala Thr Leu Leu Leu Leu Ser Trp Leu Arg Ala
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<210> 128

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide Probe

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<210> 129

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide Probe

<400> 129

ttggttcac agccgagctc gtcg 24

<210> 130

<211> 50

<212> DNA
<213> Artificial Sequence

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<211> 1843
<212> DNA
<213> Homo Sapien

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<222> 1837
<223> unknown base

<400> 131
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<210> 132

<211> 490

<212> PRT

<213> Homo Sapien

<400> 132

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 35 40 45
 Gln Leu Thr Gly Gly Phe Asp Asp Leu Gln Val Cys Ala Asp Pro
 50 55 60
 Gly Ile Pro Glu Asn Gly Phe Arg Thr Pro Ser Gly Gly Val Phe
 65 70 75
 Phe Glu Gly Ser Val Ala Arg Phe His Cys Gln Asp Gly Phe Lys
 80 85 90
 Leu Lys Gly Ala Thr Lys Arg Leu Cys Leu Lys His Phe Asn Gly
 95 100 105
 Thr Leu Gly Trp Ile Pro Ser Asp Asn Ser Ile Cys Val Gln Glu
 110 115 120
 Asp Cys Arg Ile Pro Gln Ile Glu Asp Ala Glu Ile His Asn Lys
 125 130 135

P1618P2C2.txt

| | | | | | |
|-----------------|---------|-----------------|---------|-----------------|---------|
| Thr Tyr Arg His | Gly 140 | Glu Lys Leu Ile | Ile 145 | Thr Cys His Glu | Gly 150 |
| Phe Lys Ile Arg | Tyr 155 | Pro Asp Leu His | Asn 160 | Met Val Ser Leu | Cys 165 |
| Arg Asp Asp Gly | Thr 170 | Trp Asn Asn Leu | Pro 175 | Ile Cys Gln Gly | Cys 180 |
| Leu Arg Pro Leu | Ala 185 | Ser Ser Asn Gly | Tyr 190 | Val Asn Ile Ser | Glu 195 |
| Leu Gln Thr Ser | Phe 200 | Pro Val Gly Thr | Val 205 | Ile Ser Tyr Arg | Cys 210 |
| Phe Pro Gly Phe | Lys 215 | Leu Asp Gly Ser | Ala 220 | Tyr Leu Glu Cys | Leu 225 |
| Gln Asn Leu Ile | Trp 230 | Ser Ser Ser Pro | Pro 235 | Arg Cys Leu Ala | Leu 240 |
| Glu Ala Gln Val | Cys 245 | Pro Leu Pro Pro | Met 250 | Val Ser His Gly | Asp 255 |
| Phe Val Cys His | Pro 260 | Arg Pro Cys Glu | Arg 265 | Tyr Asn His Gly | Thr 270 |
| Val Val Glu Phe | Tyr 275 | Cys Asp Pro Gly | Tyr 280 | Ser Leu Thr Ser | Asp 285 |
| Tyr Lys Tyr Ile | Thr 290 | Cys Gln Tyr Gly | Glu 295 | Trp Phe Pro Ser | Tyr 300 |
| Gln Val Tyr Cys | Ile 305 | Lys Ser Glu Gln | Thr 310 | Trp Pro Ser Thr | His 315 |
| Glu Thr Leu Leu | Thr 320 | Thr Trp Lys Ile | Val 325 | Ala Phe Thr Ala | Thr 330 |
| Ser Val Leu Leu | Val 335 | Leu Leu Leu Val | Ile 340 | Leu Ala Arg Met | Phe 345 |
| Gln Thr Lys Phe | Lys 350 | Ala His Phe Pro | Pro 355 | Arg Gly Pro Pro | Arg 360 |
| Ser Ser Ser Ser | Asp 365 | Pro Asp Phe Val | Val 370 | Val Asp Gly Val | Pro 375 |
| Val Met Leu Pro | Ser 380 | Tyr Asp Glu Ala | Val 385 | Ser Gly Gly Leu | Ser 390 |
| Ala Leu Gly Pro | Gly 395 | Tyr Met Ala Ser | Val 400 | Gly Gln Gly Cys | Pro 405 |
| Leu Pro Val Asp | Asp 410 | Gln Ser Pro Pro | Ala 415 | Tyr Pro Gly Ser | Gly 420 |
| Asp Thr Asp Thr | Gly 425 | Pro Gly Glu Ser | Glu 430 | Thr Cys Asp Ser | Val 435 |
| Ser Gly Ser Ser | Glu 440 | Leu Leu Gln Ser | Leu 445 | Tyr Ser Pro Pro | Arg 450 |

P1618P2C2.txt

Cys Gln Glu Ser Thr His Pro Ala Ser Asp Asn Pro Asp Ile Ile
455 460 465

Ala Ser Thr Ala Glu Glu Val Ala Ser Thr Ser Pro Gly Ile His
470 475 480

His Ala His Trp Val Leu Phe Leu Arg Asn
485 490

<210> 133

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 133

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<210> 134

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 134

agccaggatc gcagtaaaac tcc 23

<210> 135

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 135

atttaaactt gatgggtctg cgtatcttga gtgcttaca aaccttatct 50

<210> 136

<211> 1815

<212> DNA

<213> Homo Sapien

<400> 136

cccacgcgtc cgctccgcgc cctccccccc gcctcccgtg cgggccgtcg 50

gtggcctaga gatgctgctg ccgcggttgc agttgtcgcg cagcctctg 100

cccgccagcc cgctccaccg ccgtagcgcc cgagtgtcgg ggggcgcacc 150

cgagtggggc catgaggccg ggaaccgcgc tacaggccgt gctgctggcc 200

gtgctgctgg tggggctgcg ggccgcgacg ggtcgcttgc tgagtgcctc 250

ggatttgac ctcagaggag ggcagccagt ctgccgggga gggacacaga 300

ggccttgta taaagtcatt tacttccatg atacttctcg aagactgaac 350

P1618P2C2.txt

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tttgaggaag ccaaagaagc ctgcaggagg gatggaggcc agctagtcag 400
catcgagtct gaagatgaac agaaactgat agaaaagttc attgaaaacc 450
tcttgccatc tgatggtgac ttctggattg ggctcaggag gcgtgaggag 500
aaacaaagca atagcacagc ctgccaggac ctttatgctt ggactgatgg 550
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gcgagggtctg cgtggtcatg taccatcagc catcggcacc cgctggcatc 650
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agcaggaaaa aaaaa 1815

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<210> 137
 <211> 382
 <212> PRT

<213> Homo Sapien

P1618P2C2.txt

<400> 137

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20 25 30
Asp Leu Asp Leu Arg Gly Gly Gln Pro Val Cys Arg Gly Gly Thr
35 40 45
Gln Arg Pro Cys Tyr Lys Val Ile Tyr Phe His Asp Thr Ser Arg
50 55 60
Arg Leu Asn Phe Glu Glu Ala Lys Glu Ala Cys Arg Arg Asp Gly
65 70 75
Gly Gln Leu Val Ser Ile Glu Ser Glu Asp Glu Gln Lys Leu Ile
80 85 90
Glu Lys Phe Ile Glu Asn Leu Leu Pro Ser Asp Gly Asp Phe Trp
95 100 105
Ile Gly Leu Arg Arg Arg Glu Glu Lys Gln Ser Asn Ser Thr Ala
110 115 120
Cys Gln Asp Leu Tyr Ala Trp Thr Asp Gly Ser Ile Ser Gln Phe
125 130 135
Arg Asn Trp Tyr Val Asp Glu Pro Ser Cys Gly Ser Glu Val Cys
140 145 150
Val Val Met Tyr His Gln Pro Ser Ala Pro Ala Gly Ile Gly Gly
155 160 165
Pro Tyr Met Phe Gln Trp Asn Asp Asp Arg Cys Asn Met Lys Asn
170 175 180
Asn Phe Ile Cys Lys Tyr Ser Asp Glu Lys Pro Ala Val Pro Ser
185 190 195
Arg Glu Ala Glu Gly Glu Glu Thr Glu Leu Thr Thr Pro Val Leu
200 205 210
Pro Glu Glu Thr Gln Glu Glu Asp Ala Lys Lys Thr Phe Lys Glu
215 220 225
Ser Arg Glu Ala Ala Leu Asn Leu Ala Tyr Ile Leu Ile Pro Ser
230 235 240
Ile Pro Leu Leu Leu Leu Leu Val Val Thr Thr Val Val Cys Trp
245 250 255
Val Trp Ile Cys Arg Lys Arg Lys Arg Glu Gln Pro Asp Pro Ser
260 265 270
Thr Lys Lys Gln His Thr Ile Trp Pro Ser Pro His Gln Gly Asn
275 280 285
Ser Pro Asp Leu Glu Val Tyr Asn Val Ile Arg Lys Gln Ser Glu
290 295 300

P1618P2C2.txt

Ala Asp Leu Ala Glu Thr Arg Pro Asp Leu Lys Asn Ile Ser Phe
 305 310 315
 Arg Val Cys Ser Gly Glu Ala Thr Pro Asp Asp Met Ser Cys Asp
 320 325 330
 Tyr Asp Asn Met Ala Val Asn Pro Ser Glu Ser Gly Phe Val Thr
 335 340 345
 Leu Val Ser Val Glu Ser Gly Phe Val Thr Asn Asp Ile Tyr Glu
 350 355 360
 Phe Ser Pro Asp Gln Met Gly Arg Ser Lys Glu Ser Gly Trp Val
 365 370 375
 Glu Asn Glu Ile Tyr Gly Tyr
 380

<210> 138
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 138
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<210> 139
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 139
 aagccaaaga agcctgcagg aggg 24

<210> 140
 <211> 24
 <212> DNA
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<220>
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<400> 140
 cagtccaagc ataaaggtcc tggc 24

<210> 141
 <211> 1514
 <212> DNA
 <213> Homo Sapien

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 ctggatgtac gcatccgcag gttcccgagg acttgggggc gcccgtgag 100
 ccccgcgcc cgcagaagac ttgtgtttgc ctctgcagc ctcaaccgg 150

agggcagcga gggcctacca ccatgatcac tgggtgtgttc agcatgcgct 200
 tgtggacccc agtgggcgctc ctgacctcgc tggcgacttg cctgcaccag 250
 cggcgggtgg ccctggccga gctgcaggag gccgatggcc agtgtccggt 300
 cgaccgcagc ctgctgaagt tgaaaatggt gcaggctcgtg tttcgacacg 350
 gggctcggag tcctctcaag ccgctcccgc tggaggagca ggtagagtgg 400
 aacccccagc tattagaggt cccaccccaa actcagtttg attacacagt 450
 caccaatcta gctggtggtc cgaaaccata ttctccttac gactctcaat 500
 accatgagac caccctgaag gggggcatgt ttgctgggca gctgaccaag 550
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 gcctgaggca gagaaccaga ggccggaggc agactgcctc tttacagcca 850
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 cagggaagt cttcagatgg cagtaggccc attcctccac atcctagaga 1100
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 aaaaatacca tgcactctgc tctcaaaactc aggtgatgga agttggaaat 1450
 gaagagtaac tgatttataa aagcaggatg tggtgatttt aaaataaagt 1500
 gcctttatac aatg 1514

<210> 142

<211> 428

<212> PRT

<213> Homo Sapien

<400> 142

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 Leu Ala Glu Leu Gln Glu Ala Asp Gly Gln Cys Pro Val Asp Arg
 35 40 45
 Ser Leu Leu Lys Leu Lys Met Val Gln Val Val Phe Arg His Gly
 50 55 60
 Ala Arg Ser Pro Leu Lys Pro Leu Pro Leu Glu Glu Gln Val Glu
 65 70 75
 Trp Asn Pro Gln Leu Leu Glu Val Pro Pro Gln Thr Gln Phe Asp
 80 85 90
 Tyr Thr Val Thr Asn Leu Ala Gly Gly Pro Lys Pro Tyr Ser Pro
 95 100 105
 Tyr Asp Ser Gln Tyr His Glu Thr Thr Leu Lys Gly Gly Met Phe
 110 115 120
 Ala Gly Gln Leu Thr Lys Val Gly Met Gln Gln Met Phe Ala Leu
 125 130 135
 Gly Glu Arg Leu Arg Lys Asn Tyr Val Glu Asp Ile Pro Phe Leu
 140 145 150
 Ser Pro Thr Phe Asn Pro Gln Glu Val Phe Ile Arg Ser Thr Asn
 155 160 165
 Ile Phe Arg Asn Leu Glu Ser Thr Arg Cys Leu Leu Ala Gly Leu
 170 175 180
 Phe Gln Cys Gln Lys Glu Gly Pro Ile Ile Ile His Thr Asp Glu
 185 190 195
 Ala Asp Ser Glu Val Leu Tyr Pro Asn Tyr Gln Ser Cys Trp Ser
 200 205 210
 Leu Arg Gln Arg Thr Arg Gly Arg Arg Gln Thr Ala Ser Leu Gln
 215 220 225
 Pro Gly Ile Ser Glu Asp Leu Lys Lys Val Lys Asp Arg Met Gly
 230 235 240
 Ile Asp Ser Ser Asp Lys Val Asp Phe Phe Ile Leu Leu Asp Asn
 245 250 255
 Val Ala Ala Glu Gln Ala His Asn Leu Pro Ser Cys Pro Met Leu
 260 265 270
 Lys Arg Phe Ala Arg Met Ile Glu Gln Arg Ala Val Asp Thr Ser
 275 280 285
 Leu Tyr Ile Leu Pro Lys Glu Asp Arg Glu Ser Leu Gln Met Ala
 290 295 300
 Val Gly Pro Phe Leu His Ile Leu Glu Ser Asn Leu Leu Lys Ala
 305 310 315
 Met Asp Ser Ala Thr Ala Pro Asp Lys Ile Arg Lys Leu Tyr Leu

320

325

330

Tyr Ala Ala His Asp Val Thr Phe Ile Pro Leu Leu Met Thr Leu
 335 340 345

Gly Ile Phe Asp His Lys Trp Pro Pro Phe Ala Val Asp Leu Thr
 350 355 360

Met Glu Leu Tyr Gln His Leu Glu Ser Lys Glu Trp Phe Val Gln
 365 370 375

Leu Tyr Tyr His Gly Lys Glu Gln Val Pro Arg Gly Cys Pro Asp
 380 385 390

Gly Leu Cys Pro Leu Asp Met Phe Leu Asn Ala Met Ser Val Tyr
 395 400 405

Thr Leu Ser Pro Glu Lys Tyr His Ala Leu Cys Ser Gln Thr Gln
 410 415 420

Val Met Glu Val Gly Asn Glu Glu
 425

<210> 143

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 143

ccaactacca aagctgctgg agcc 24

<210> 144

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 144

gcagctctat taccacggga agga 24

<210> 145

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 145

tccttcccgt ggtaatagag ctgc 24

<210> 146

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 146

ggcagagaac cagaggccgg aggagactgc ctctttacag ccagg 45

<210> 147

<211> 1686

<212> DNA

<213> Homo Sapien

<400> 147

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gctctgctat tctccttgat ccttgccatt tgcaccagac ctggattcct 150
agcgtctcca tctggagtgc ggctgggtgg gggcctccac cgctgtgaag 200
ggcgggtgga ggtggaacag aaaggccagt ggggcaccgt gtgtgatgac 250
ggctggggaca ttaaggacgt ggctgtgttg tgccgggagc tgggctgtgg 300
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cagaggggtg caggctggct gacggccctg ggcattgcaa gggacgcgtg 550
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cctccgggcc gcaaagggtg tgtgccggca gctgggatgt gggagggctg 650
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tggctgagcc agatgtcatg ctcaggacga gaagcaacc ttcaggattg 750
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ggatcagaac ttacaacatc aggtctagtt ctcaggccat cagacatagt 1350

P1618P2C2.txt

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 tgtttctctg aagaactctg acaaaataca gattttggta ctgaaagaga 1550
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 tatttacaat aataaagata gcactatgtg ttcaaa 1686

<210> 148
 <211> 347
 <212> PRT
 <213> Homo Sapien

<400> 148
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 1 5 10 15
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 20 25 30
 His Arg Cys Glu Gly Arg Val Glu Val Glu Gln Lys Gly Gln Trp
 35 40 45
 Gly Thr Val Cys Asp Asp Gly Trp Asp Ile Lys Asp Val Ala Val
 50 55 60
 Leu Cys Arg Glu Leu Gly Cys Gly Ala Ala Ser Gly Thr Pro Ser
 65 70 75
 Gly Ile Leu Tyr Glu Pro Pro Ala Glu Lys Glu Gln Lys Val Leu
 80 85 90
 Ile Gln Ser Val Ser Cys Thr Gly Thr Glu Asp Thr Leu Ala Gln
 95 100 105
 Cys Glu Gln Glu Glu Val Tyr Asp Cys Ser His Asp Glu Asp Ala
 110 115 120
 Gly Ala Ser Cys Glu Asn Pro Glu Ser Ser Phe Ser Pro Val Pro
 125 130 135
 Glu Gly Val Arg Leu Ala Asp Gly Pro Gly His Cys Lys Gly Arg
 140 145 150
 Val Glu Val Lys His Gln Asn Gln Trp Tyr Thr Val Cys Gln Thr
 155 160 165
 Gly Trp Ser Leu Arg Ala Ala Lys Val Val Cys Arg Gln Leu Gly
 170 175 180
 Cys Gly Arg Ala Val Leu Thr Gln Lys Arg Cys Asn Lys His Ala
 185 190 195
 Tyr Gly Arg Lys Pro Ile Trp Leu Ser Gln Met Ser Cys Ser Gly
 200 205 210

P1618P2C2.txt

Arg Glu Ala Thr Leu Gln Asp Cys Pro Ser Gly Pro Trp Gly Lys
 215 220
 Asn Thr Cys Asn His Asp Glu Asp Thr Trp Val Glu Cys Glu Asp
 230 235 240
 Pro Phe Asp Leu Arg Leu Val Gly Gly Asp Asn Leu Cys Ser Gly
 245 250 255
 Arg Leu Glu Val Leu His Lys Gly Val Trp Gly Ser Val Cys Asp
 260 265 270
 Asp Asn Trp Gly Glu Lys Glu Asp Gln Val Val Cys Lys Gln Leu
 275 280 285
 Gly Cys Gly Lys Ser Leu Ser Pro Ser Phe Arg Asp Arg Lys Cys
 290 295 300
 Tyr Gly Pro Gly Val Gly Arg Ile Trp Leu Asp Asn Val Arg Cys
 305 310 315
 Ser Gly Glu Glu Gln Ser Leu Glu Gln Cys Gln His Arg Phe Trp
 320 325 330
 Gly Phe His Asp Cys Thr His Gln Glu Asp Val Ala Val Ile Cys
 335 340 345

Ser Val

<210> 149

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 149

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<210> 150

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 150

ggctcataca aaataccact aggg 24

<210> 151

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 151

gggcctccac cgctgtgaag ggcgggtgga ggtggaacag aaaggccagt 50

<210> 152
<211> 1427
<212> DNA
<213> Homo Sapien

<400> 152

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gctaccagga agagtctgcc gaaggatgaag gccatggact tcatcacctc 150
cacagccatc ctgcccctgc tgttcggctg cctgggcgtc ttcggcctct 200
tccggctgct gcagtgggtg cgcgggaagg cctacctgcg gaatgctgtg 250
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gtgcagatct gctggcagag gacaatcaaa aacgacaaca agcttcttcc 1250
cagggtgagg ggaacactt aaggaataaa tatggagctg gggtttaaca 1300
ctaaaaacta gaaataaaca tctcaaacag taataaaaaa aaaaaagggc 1350
ggccgcgact ctagagtcga cctgcagaag cttggccgcc atggcccaac 1400
ttgtttattg cagcttataa tggttac 1427

<210> 153
 <211> 310
 <212> PRT
 <213> Homo Sapien

<400> 153

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 20 25 30
 Gly Lys Ala Tyr Leu Arg Asn Ala Val Val Val Ile Thr Gly Ala
 35 40 45
 Thr Ser Gly Leu Gly Lys Glu Cys Ala Lys Val Phe Tyr Ala Ala
 50 55 60
 Gly Ala Lys Leu Val Leu Cys Gly Arg Asn Gly Gly Ala Leu Glu
 65 70 75
 Glu Leu Ile Arg Glu Leu Thr Ala Ser His Ala Thr Lys Val Gln
 80 85 90
 Thr His Lys Pro Tyr Leu Val Thr Phe Asp Leu Thr Asp Ser Gly
 95 100 105
 Ala Ile Val Ala Ala Ala Glu Ile Leu Gln Cys Phe Gly Tyr
 110 115 120
 Val Asp Ile Leu Val Asn Asn Ala Gly Ile Ser Tyr Arg Gly Thr
 125 130 135
 Ile Met Asp Thr Thr Val Asp Val Asp Lys Arg Val Met Glu Thr
 140 145 150
 Asn Tyr Phe Gly Pro Val Ala Leu Thr Lys Ala Leu Leu Pro Ser
 155 160 165
 Met Ile Lys Arg Arg Gln Gly His Ile Val Ala Ile Ser Ser Ile
 170 175 180
 Gln Gly Lys Met Ser Ile Pro Phe Arg Ser Ala Tyr Ala Ala Ser
 185 190 195
 Lys His Ala Thr Gln Ala Phe Phe Asp Cys Leu Arg Ala Glu Met
 200 205 210
 Glu Gln Tyr Glu Ile Glu Val Thr Val Ile Ser Pro Gly Tyr Ile
 215 220 225
 His Thr Asn Leu Ser Val Asn Ala Ile Thr Ala Asp Gly Ser Arg
 230 235 240
 Tyr Gly Val Met Asp Thr Thr Thr Ala Gln Gly Arg Ser Pro Val
 245 250 255
 Glu Val Ala Gln Asp Val Leu Ala Ala Val Gly Lys Lys Lys Lys
 260 265 270
 Asp Val Ile Leu Ala Asp Leu Leu Pro Ser Leu Ala Val Tyr Leu
 275 280 285

P1618P2C2.txt

Arg Thr Leu Ala Pro Gly Leu Phe Phe Ser Leu Met Ala Ser Arg
290 295 300

Ala Arg Lys Glu Arg Lys Ser Lys Asn Ser
305 310

<210> 154
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 154
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<210> 155
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 155
cagggcaaga tgagcattcc 20

<210> 156
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 156
tcatactggt ccattctcggc acgc 24

<210> 157
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 157
aatggtgggg ccctagaaga gctcatcaga gaactcaccg cttctcatgc 50

<210> 158
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<212> DNA
<213> Homo Sapien

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<211> 300

<212> PRT

<213> Homo Sapien

<400> 159

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Arg Lys Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly
35 40 45

His Gly Ile Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys
50 55 60

Ser Lys Leu Val Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu
65 70 75

Thr Ala Ala Lys Cys Lys Gly Leu Gly Ala Lys Val His Thr Phe
80 85 90

Val Val Asp Cys Ser Asn Arg Glu Asp Ile Tyr Ser Ser Ala Lys
95 100 105

Lys Val Lys Ala Glu Ile Gly Asp Val Ser Ile Leu Val Asn Asn
110 115 120

Ala Gly Val Val Tyr Thr Ser Asp Leu Phe Ala Thr Gln Asp Pro
125 130 135

Gln Ile Glu Lys Thr Phe Glu Val Asn Val Leu Ala His Phe Trp
140 145 150

Thr Thr Lys Ala Phe Leu Pro Ala Met Thr Lys Asn Asn His Gly
155 160 165

His Ile Val Thr Val Ala Ser Ala Ala Gly His Val Ser Val Pro
170 175 180

Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe
185 190 195

His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile Thr Gly
200 205 210

Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly Phe
215 220 225

Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu
230 235 240

Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys
245 250 255

Met Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu
260 265 270

P1618P2C2.txt

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ile | Leu | Pro | Glu | Arg | Phe | Leu | Ala | Val | Leu | Lys | Arg | Lys | Ile |
| | | | | 275 | | | | | 280 | | | | | 285 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Lys | Phe | Asp | Ala | Val | Ile | Gly | Tyr | Lys | Met | Lys | Ala | Gln |
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<223> Synthetic Oligonucleotide Probe

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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 161

atcccatgca tcagcctggt tacc 24

<210> 162

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 162

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<210> 163

<211> 2076

<212> DNA

<213> Homo Sapien

<400> 163

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cgcccgcggc tcagggagga gcaccgactg cgccgcaccc tgagagatgg 100

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ccctgtgatg ggctgtttcg ctccctatac agaagtgttt ccatgccacc 200

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<210> 164

<211> 476

<212> PRT

<213> Homo Sapien

<400> 164

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 35 40 45
 Thr Pro Tyr Ile Glu Ala Gly Lys Ile Gln Lys Gly Arg Glu Leu
 50 55 60
 Ser Leu Val Gly Pro Phe Pro Gly Leu Asn Met Lys Ser Tyr Ala
 65 70 75
 Gly Phe Leu Thr Val Asn Lys Thr Tyr Asn Ser Asn Leu Phe Phe
 80 85 90
 Trp Phe Phe Pro Ala Gln Ile Gln Pro Glu Asp Ala Pro Val Val
 95 100 105
 Leu Trp Leu Gln Gly Gly Pro Gly Gly Ser Ser Met Phe Gly Leu
 110 115 120
 Phe Val Glu His Gly Pro Tyr Val Val Thr Ser Asn Met Thr Leu
 125 130 135
 Arg Asp Arg Asp Phe Pro Trp Thr Thr Thr Leu Ser Met Leu Tyr
 140 145 150
 Ile Asp Asn Pro Val Gly Thr Gly Phe Ser Phe Thr Asp Asp Thr
 155 160 165
 His Gly Tyr Ala Val Asn Glu Asp Asp Val Ala Arg Asp Leu Tyr
 170 175 180
 Ser Ala Leu Ile Gln Phe Phe Gln Ile Phe Pro Glu Tyr Lys Asn
 185 190 195
 Asn Asp Phe Tyr Val Thr Gly Glu Ser Tyr Ala Gly Lys Tyr Val
 200 205 210
 Pro Ala Ile Ala His Leu Ile His Ser Leu Asn Pro Val Arg Glu
 215 220 225
 Val Lys Ile Asn Leu Asn Gly Ile Ala Ile Gly Asp Gly Tyr Ser
 230 235 240
 Asp Pro Glu Ser Ile Ile Gly Gly Tyr Ala Glu Phe Leu Tyr Gln
 245 250 255
 Ile Gly Leu Leu Asp Glu Lys Gln Lys Lys Tyr Phe Gln Lys Gln
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P1618P2C2.txt

Cys His Glu Cys Ile Glu His Ile Arg Lys Gln Asn Trp Phe Glu
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 Ala Phe Glu Ile Leu Asp Lys Leu Leu Asp Gly Asp Leu Thr Ser
 290 295 300
 Asp Pro Ser Tyr Phe Gln Asn Val Thr Gly Cys Ser Asn Tyr Tyr
 305 310 315
 Asn Phe Leu Arg Cys Thr Glu Pro Glu Asp Gln Leu Tyr Tyr Val
 320 325 330
 Lys Phe Leu Ser Leu Pro Glu Val Arg Gln Ala Ile His Val Gly
 335 340 345
 Asn Gln Thr Phe Asn Asp Gly Thr Ile Val Glu Lys Tyr Leu Arg
 350 355 360
 Glu Asp Thr Val Gln Ser Val Lys Pro Trp Leu Thr Glu Ile Met
 365 370 375
 Asn Asn Tyr Lys Val Leu Ile Tyr Asn Gly Gln Leu Asp Ile Ile
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 Val Ala Ala Ala Leu Thr Glu Arg Ser Leu Met Gly Met Asp Trp
 395 400 405
 Lys Gly Ser Gln Glu Tyr Lys Lys Ala Glu Lys Lys Val Trp Lys
 410 415 420
 Ile Phe Lys Ser Asp Ser Glu Val Ala Gly Tyr Ile Arg Gln Ala
 425 430 435
 Gly Asp Phe His Gln Val Ile Ile Arg Gly Gly Gly His Ile Leu
 440 445 450
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 Ile Tyr Gly Lys Gly Trp Asp Pro Tyr Val Gly
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<210> 165

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 165

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<210> 166

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 166

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P1618P2C2.txt

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<400> 167
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<210> 169
 <211> 2477
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<211> 552

<212> PRT

<213> Homo Sapien

<400> 170

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          35           40           45
Arg Leu Leu Thr Ala Ala Pro Leu Ser Met Glu Gln Arg Gln Pro
          50           55           60
Trp Pro Arg Ala Leu Glu Val Asp Ser Arg Ser Val Val Leu Leu
          65           70           75
Ser Val Val Trp Val Leu Leu Ala Pro Pro Ala Ala Gly Met Pro
          80           85           90
Gln Phe Ser Thr Phe His Ser Glu Asn Arg Asp Trp Thr Phe Asn
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His Leu Thr Val His Gln Gly Thr Gly Ala Val Tyr Val Gly Ala
          110          115          120
Ile Asn Arg Val Tyr Lys Leu Thr Gly Asn Leu Thr Ile Gln Val
          125          130          135
Ala His Lys Thr Gly Pro Glu Glu Asp Asn Lys Ser Arg Tyr Pro
          140          145          150
Pro Leu Ile Val Gln Pro Cys Ser Glu Val Leu Thr Leu Thr Asn
          155          160          165
Asn Val Asn Lys Leu Leu Ile Ile Asp Tyr Ser Glu Asn Arg Leu
          170          175          180
Leu Ala Cys Gly Ser Leu Tyr Gln Gly Val Cys Lys Leu Leu Arg
          185          190          195
Leu Asp Asp Leu Phe Ile Leu Val Glu Pro Ser His Lys Lys Glu
          200          205          210
His Tyr Leu Ser Ser Val Asn Lys Thr Gly Thr Met Tyr Gly Val
          215          220          225
Ile Val Arg Ser Glu Gly Glu Asp Gly Lys Leu Phe Ile Gly Thr
          230          235          240
Ala Val Asp Gly Lys Gln Asp Tyr Phe Pro Thr Leu Ser Ser Arg
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Lys Leu Pro Arg Asp Pro Glu Ser Ser Ala Met Leu Asp Tyr Glu
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P1618P2C2.txt

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305 310 315

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320 325 330

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335 340 345

Ser Tyr Val Ser Leu Pro Phe Gly Cys Thr Arg Ala Gly Val Glu
350 355 360

Tyr Arg Leu Leu Gln Ala Ala Tyr Leu Ala Lys Pro Gly Asp Ser
365 370 375

Leu Ala Gln Ala Phe Asn Ile Thr Ser Gln Asp Asp Val Leu Phe
380 385 390

Ala Ile Phe Ser Lys Gly Gln Lys Gln Tyr His His Pro Pro Asp
395 400 405

Asp Ser Ala Leu Cys Ala Phe Pro Ile Arg Ala Ile Asn Leu Gln
410 415 420

Ile Lys Glu Arg Leu Gln Ser Cys Tyr Gln Gly Glu Gly Asn Leu
425 430 435

Glu Leu Asn Trp Leu Leu Gly Lys Asp Val Gln Cys Thr Lys Ala
440 445 450

Pro Val Pro Ile Asp Asp Asn Phe Cys Gly Leu Asp Ile Asn Gln
455 460 465

Pro Leu Gly Gly Ser Thr Pro Val Glu Gly Leu Thr Leu Tyr Thr
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Gly Tyr Ser Val Val Phe Val Gly Thr Lys Ser Gly Lys Leu Lys
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Lys Val Arg Val Tyr Glu Phe Arg Cys Ser Asn Ala Ile His Leu
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cttctgccct ttggagaaga tggc 24

<210> 173
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<223> Synthetic oligonucleotide probe

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<212> PRT

<213> Homo Sapien

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<223> unknown amino acid

<400> 175

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| 1 | | | | | 5 | | | | 10 | | | | | 15 |
| Leu | Leu | Leu | Leu | Val | Val | Leu | Gly | Phe | Leu | Val | Leu | Arg | Arg | Leu |
| | | | | 20 | | | | | 25 | | | | | 30 |
| Asp | Trp | Ser | Thr | Leu | Val | Pro | Leu | Arg | Leu | Arg | His | Arg | Gln | Leu |
| | | | | 35 | | | | | 40 | | | | | 45 |
| Gly | Leu | Gln | Ala | Lys | Gly | Trp | Asn | Phe | Met | Leu | Glu | Asp | Ser | Thr |
| | | | | 50 | | | | | 55 | | | | | 60 |
| Phe | Trp | Ile | Phe | Gly | Gly | Ser | Ile | His | Tyr | Phe | Arg | Val | Pro | Arg |
| | | | | 65 | | | | | 70 | | | | | 75 |

P1618P2C2.txt

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 Asn Thr Leu Thr Thr Tyr Val Pro Trp Asn Leu His Glu Pro Glu
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 110 115 120
 Val Leu Met Ala Ala Glu Ile Gly Leu Trp Val Ile Leu Arg Pro
 125 130 135
 Gly Pro Tyr Ile Cys Ser Glu Met Asp Leu Gly Gly Leu Pro Ser
 140 145 150
 Trp Leu Leu Gln Asp Pro Gly Met Arg Leu Arg Thr Thr Tyr Lys
 155 160 165
 Gly Phe Thr Glu Ala Val Asp Leu Tyr Phe Asp His Leu Met Ser
 170 175 180
 Arg Val Val Pro Leu Gln Tyr Lys Arg Gly Gly Pro Ile Ile Ala
 185 190 195
 Val Gln Val Glu Asn Glu Tyr Gly Ser Tyr Asn Lys Asp Pro Ala
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 Tyr Met Pro Tyr Val Lys Lys Ala Leu Glu Asp Arg Gly Ile Val
 215 220 225
 Glu Leu Leu Leu Thr Ser Asp Asn Lys Asp Gly Leu Ser Lys Gly
 230 235 240
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 Glu Leu Gln Leu Leu Thr Thr Phe Leu Phe Asn Val Gln Gly Thr
 260 265 270
 Gln Pro Lys Met Val Met Glu Tyr Trp Thr Gly Trp Phe Asp Ser
 275 280 285
 Trp Gly Gly Pro His Asn Ile Leu Asp Ser Ser Glu Val Leu Lys
 290 295 300
 Thr Val Ser Ala Ile Val Asp Ala Gly Ser Ser Ile Asn Leu Tyr
 305 310 315
 Met Phe His Gly Gly Thr Asn Phe Gly Phe Met Asn Gly Ala Met
 320 325 330
 His Phe His Asp Tyr Lys Ser Asp Val Thr Ser Tyr Asp Tyr Asp
 335 340 345
 Ala Val Leu Thr Glu Ala Gly Asp Tyr Thr Ala Lys Tyr Met Lys
 350 355 360
 Leu Arg Asp Phe Phe Gly Ser Ile Ser Gly Ile Pro Leu Pro Pro
 365 370 375
 Pro Pro Asp Leu Leu Pro Lys Met Pro Tyr Glu Pro Leu Thr Pro
 380 385 390

P1618P2C2.txt

Val Leu Tyr Leu Ser Leu Trp Asp Ala Leu Lys Tyr Leu Gly Glu
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 410 415 420
 Asn Gly Gly Asn Gly Gln Ser Phe Gly Tyr Ile Leu Tyr Glu Thr
 425 430 435
 Ser Ile Thr Ser Ser Gly Ile Leu Ser Gly His Val His Asp Arg
 440 445 450
 Gly Gln Val Phe Val Asn Thr Val Ser Ile Gly Phe Leu Asp Tyr
 455 460 465
 Lys Thr Thr Lys Ile Ala Val Pro Leu Ile Gln Gly Tyr Thr Val
 470 475 480
 Leu Arg Ile Leu Val Glu Asn Arg Gly Arg Val Asn Tyr Gly Glu
 485 490 495
 Asn Ile Asp Asp Gln Arg Lys Gly Leu Ile Gly Asn Leu Tyr Leu
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 515 520 525
 Lys Lys Ser Phe Phe Gln Arg Phe Gly Leu Asp Lys Trp Xaa Ser
 530 535 540
 Leu Pro Glu Thr Pro Thr Leu Pro Ala Phe Phe Leu Gly Ser Leu
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 Ser Ile Ser Ser Thr Pro Cys Asp Thr Phe Leu Lys Leu Glu Gly
 560 565 570
 Trp Glu Lys Gly Val Val Phe Ile Asn Gly Gln Asn Leu Gly Arg
 575 580 585
 Tyr Trp Asn Ile Gly Pro Gln Lys Thr Leu Tyr Leu Pro Gly Pro
 590 595 600
 Trp Leu Ser Ser Gly Ile Asn Gln Val Ile Val Phe Glu Glu Thr
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 agacgcaggc acctacgcca aaggggagca aagccgggct cggcccgagg 150
 Page 110

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P1618P2C2.txt

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<400> 177

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| Met | Ala | Pro | Lys | Lys | Leu | Ser | Cys | Leu | Arg | Ser | Leu | Leu | Leu | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 |
| Leu | Ser | Leu | Thr | Leu | Leu | Leu | Pro | Gln | Ala | Asp | Thr | Arg | Ser | Phe |
| | | | 20 | | | | | | 25 | | | | | 30 |
| Val | Val | Asp | Arg | Gly | His | Asp | Arg | Phe | Leu | Leu | Asp | Gly | Ala | Pro |
| | | | 35 | | | | | | 40 | | | | | 45 |
| Phe | Arg | Tyr | Val | Ser | Gly | Ser | Leu | His | Tyr | Phe | Arg | Val | Pro | Arg |
| | | | 50 | | | | | | 55 | | | | | 60 |
| Val | Leu | Trp | Ala | Asp | Arg | Leu | Leu | Lys | Met | Arg | Trp | Ser | Gly | Leu |
| | | | 65 | | | | | | 70 | | | | | 75 |
| Asn | Ala | Ile | Gln | Phe | Tyr | Val | Pro | Trp | Asn | Tyr | His | Glu | Pro | Gln |
| | | | 80 | | | | | | 85 | | | | | 90 |
| Pro | Gly | Val | Tyr | Asn | Phe | Asn | Gly | Ser | Arg | Asp | Leu | Ile | Ala | Phe |
| | | | 95 | | | | | | 100 | | | | | 105 |
| Leu | Asn | Glu | Ala | Ala | Leu | Ala | Asn | Leu | Leu | Val | Ile | Leu | Arg | Pro |
| | | | 110 | | | | | | 115 | | | | | 120 |

P1618P2C2.txt

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|
| Gly | Pro | Tyr | Ile | Cys | Ala | Glu | Trp | Glu | Met | Gly | Gly | Leu | Pro | Ser | | 125 | 130 | 135 |
| Trp | Leu | Leu | Arg | Lys | Pro | Glu | Ile | His | Leu | Arg | Thr | Ser | Asp | Pro | | 140 | 145 | 150 |
| Asp | Phe | Leu | Ala | Ala | Val | Asp | Ser | Trp | Phe | Lys | Val | Leu | Leu | Pro | | 155 | 160 | 165 |
| Lys | Ile | Tyr | Pro | Trp | Leu | Tyr | His | Asn | Gly | Gly | Asn | Ile | Ile | Ser | | 170 | 175 | 180 |
| Ile | Gln | Val | Glu | Asn | Glu | Tyr | Gly | Ser | Tyr | Arg | Ala | Cys | Asp | Phe | | 185 | 190 | 195 |
| Ser | Tyr | Met | Arg | His | Leu | Ala | Gly | Leu | Phe | Arg | Ala | Leu | Leu | Gly | | 200 | 205 | 210 |
| Glu | Lys | Ile | Leu | Leu | Phe | Thr | Thr | Asp | Gly | Pro | Glu | Gly | Leu | Lys | | 215 | 220 | 225 |
| Cys | Gly | Ser | Leu | Arg | Gly | Leu | Tyr | Thr | Thr | Val | Asp | Phe | Gly | Pro | | 230 | 235 | 240 |
| Ala | Asp | Asn | Met | Thr | Lys | Ile | Phe | Thr | Leu | Leu | Arg | Lys | Tyr | Glu | | 245 | 250 | 255 |
| Pro | His | Gly | Pro | Leu | Val | Asn | Ser | Glu | Tyr | Tyr | Thr | Gly | Trp | Leu | | 260 | 265 | 270 |
| Asp | Tyr | Trp | Gly | Gln | Asn | His | Ser | Thr | Arg | Ser | Val | Ser | Ala | Val | | 275 | 280 | 285 |
| Thr | Lys | Gly | Leu | Glu | Asn | Met | Leu | Lys | Leu | Gly | Ala | Ser | Val | Asn | | 290 | 295 | 300 |
| Met | Tyr | Met | Phe | His | Gly | Gly | Thr | Asn | Phe | Gly | Tyr | Trp | Asn | Gly | | 305 | 310 | 315 |
| Ala | Asp | Lys | Lys | Gly | Arg | Phe | Leu | Pro | Ile | Thr | Thr | Ser | Tyr | Asp | | 320 | 325 | 330 |
| Tyr | Asp | Ala | Pro | Ile | Ser | Glu | Ala | Gly | Asp | Pro | Thr | Pro | Lys | Leu | | 335 | 340 | 345 |
| Phe | Ala | Leu | Arg | Asp | Val | Ile | Ser | Lys | Phe | Gln | Glu | Val | Pro | Leu | | 350 | 355 | 360 |
| Gly | Pro | Leu | Pro | Pro | Pro | Ser | Pro | Lys | Met | Met | Leu | Gly | Pro | Val | | 365 | 370 | 375 |
| Thr | Leu | His | Leu | Val | Gly | His | Leu | Leu | Ala | Phe | Leu | Asp | Leu | Leu | | 380 | 385 | 390 |
| Cys | Pro | Arg | Gly | Pro | Ile | His | Ser | Ile | Leu | Pro | Met | Thr | Phe | Glu | | 395 | 400 | 405 |
| Ala | Val | Lys | Gln | Asp | His | Gly | Phe | Met | Leu | Tyr | Arg | Thr | Tyr | Met | | 410 | 415 | 420 |
| Thr | His | Thr | Ile | Phe | Glu | Pro | Thr | Pro | Phe | Trp | Val | Pro | Asn | Asn | | 425 | 430 | 435 |

P1618P2C2.txt

Gly Val His Asp Arg Ala Tyr Val Met Val Asp Gly Val Phe Gln
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Gly Val Val Glu Arg Asn Met Arg Asp Lys Leu Phe Leu Thr Gly
455 460 465
Lys Leu Gly Ser Lys Leu Asp Ile Leu Val Glu Asn Met Gly Arg
470 475 480
Leu Ser Phe Gly Ser Asn Ser Ser Asp Phe Lys Gly Leu Leu Lys
485 490 495
Pro Pro Ile Leu Gly Gln Thr Ile Leu Thr Gln Trp Met Met Phe
500 505 510
Pro Leu Lys Ile Asp Asn Leu Val Lys Trp Trp Phe Pro Leu Gln
515 520 525
Leu Pro Lys Trp Pro Tyr Pro Gln Ala Pro Ser Gly Pro Thr Phe
530 535 540
Tyr Ser Lys Thr Phe Pro Ile Leu Gly Ser Val Gly Asp Thr Phe
545 550 555
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560 565 570
Phe Asn Leu Gly Arg Tyr Trp Thr Lys Gln Gly Pro Gln Gln Thr
575 580 585
Leu Tyr Val Pro Arg Phe Leu Leu Phe Pro Arg Gly Ala Leu Asn
590 595 600
Lys Ile Thr Leu Leu Glu Leu Glu Asp Val Pro Leu Gln Pro Gln
605 610 615
Val Gln Phe Leu Asp Lys Pro Ile Leu Asn Ser Thr Ser Thr Leu
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<223> Synthetic Oligonucleotide Probe

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<210> 179

<211> 24

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<223> Synthetic Oligonucleotide Probe

<400> 179

tggacaaatc cccttgctca gccc 24

<210> 180

<211> 50

<212> DNA

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ccagctatga ctatgatgca cc 22

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<211> 1947

<212> DNA

<213> Homo Sapien

<400> 184

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gtatttgagt gcaccacaa tatggcttac atgttgaaaa agcttctcat 100

cagttacata tccattatatt gtgtttatgg ctttatctgc ctctacactc 150

tcttctgggtt attcaggata cctttgaagg aatattcttt cgaaaaagtc 200

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<212> PRT
<213> Homo Sapien

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35 40 45
Glu Ser Ser Phe Ser Asp Ile Pro Asp Val Lys Asn Asp Phe Ala
50 55 60
Phe Leu Leu His Met Val Asp Gln Tyr Asp Gln Leu Tyr Ser Lys
65 70 75
Arg Phe Gly Val Phe Leu Ser Glu Val Ser Glu Asn Lys Leu Arg
80 85 90
Glu Ile Ser Leu Asn His Glu Trp Thr Phe Glu Lys Leu Arg Gln
95 100 105
His Ile Ser Arg Asn Ala Gln Asp Lys Gln Glu Leu His Leu Phe
110 115 120
Met Leu Ser Gly Val Pro Asp Ala Val Phe Asp Leu Thr Asp Leu
125 130 135
Asp Val Leu Lys Leu Glu Leu Ile Pro Glu Ala Lys Ile Pro Ala
140 145 150
Lys Ile Ser Gln Met Thr Asn Leu Gln Glu Leu His Leu Cys His
155 160 165
Cys Pro Ala Lys Val Glu Gln Thr Ala Phe Ser Phe Leu Arg Asp
170 175 180
His Leu Arg Cys Leu His Val Lys Phe Thr Asp Val Ala Glu Ile
185 190 195
Pro Ala Trp Val Tyr Leu Leu Lys Asn Leu Arg Glu Leu Tyr Leu
200 205 210
Ile Gly Asn Leu Asn Ser Glu Asn Asn Lys Met Ile Gly Leu Glu
215 220 225
Ser Leu Arg Glu Leu Arg His Leu Lys Ile Leu His Val Lys Ser
230 235 240
Asn Leu Thr Lys Val Pro Ser Asn Ile Thr Asp Val Ala Pro His
245 250 255

P1618P2C2.txt

Leu Thr Lys Leu Val Ile His Asn Asp Gly Thr Lys Leu Leu Val
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Leu Asn Ser Leu Lys Lys Met Met Asn Val Ala Glu Leu Glu Leu
275 280 285
Gln Asn Cys Glu Leu Glu Arg Ile Pro His Ala Ile Phe Ser Leu
290 295 300
Ser Asn Leu Gln Glu Leu Asp Leu Lys Ser Asn Asn Ile Arg Thr
305 310 315
Ile Glu Glu Ile Ile Ser Phe Gln His Leu Lys Arg Leu Thr Cys
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Cys Leu Asp Val Ser Tyr Asn Asn Ile Ser Met Ile Pro Ile Glu
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Ile Gly Leu Leu Gln Asn Leu Gln His Leu His Ile Thr Gly Asn
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Lys Val Asp Ile Leu Pro Lys Gln Leu Phe Lys Cys Ile Lys Leu
410 415 420
Arg Thr Leu Asn Leu Gly Gln Asn Cys Ile Thr Ser Leu Pro Glu
425 430 435
Lys Val Gly Gln Leu Ser Gln Leu Thr Gln Leu Glu Leu Lys Gly
440 445 450
Asn Cys Leu Asp Arg Leu Pro Ala Gln Leu Gly Gln Cys Arg Met
455 460 465
Leu Lys Lys Ser Gly Leu Val Val Glu Asp His Leu Phe Asp Thr
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<400> 187
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 gcctgcatgt aaaaaaa 2917

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 <213> Homo Sapien

<400> 190
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 20 25 30
 Ser Cys Thr Val Ser Leu Gly Gly Ala Asn Met Ala Glu Thr His
 35 40 45
 Lys Ala Met Ile Leu Gln Leu Asn Pro Ser Glu Asn Cys Thr Trp
 50 55 60
 Thr Ile Glu Arg Pro Glu Asn Lys Ser Ile Arg Ile Ile Phe Ser
 65 70 75
 Tyr Val Gln Leu Asp Pro Asp Gly Ser Cys Glu Ser Glu Asn Ile
 80 85 90
 Lys Val Phe Asp Gly Thr Ser Ser Asn Gly Pro Leu Leu Gly Gln
 95 100 105
 Val Cys Ser Lys Asn Asp Tyr Val Pro Val Phe Glu Ser Ser Ser
 110 115 120
 Ser Thr Leu Thr Phe Gln Ile Val Thr Asp Ser Ala Arg Ile Gln
 125 130 135
 Arg Thr Val Phe Val Phe Tyr Tyr Phe Phe Ser Pro Asn Ile Ser
 140 145 150
 Ile Pro Asn Cys Gly Gly Tyr Leu Asp Thr Leu Glu Gly Ser Phe
 155 160 165
 Thr Ser Pro Asn Tyr Pro Lys Pro His Pro Glu Leu Ala Tyr Cys
 170 175 180
 Val Trp His Ile Gln Val Glu Lys Asp Tyr Lys Ile Lys Leu Asn
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185

190

195

Phe Lys Glu Ile Phe Leu Glu Ile Asp Lys Gln Cys Lys Phe Asp
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 Phe Leu Ala Ile Tyr Asp Gly Pro Ser Thr Asn Ser Gly Leu Ile
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 230 235 240
 Asn Ser Leu Thr Val Val Leu Ser Thr Asp Tyr Ala Asn Ser Tyr
 245 250 255
 Arg Gly Phe Ser Ala Ser Tyr Thr Ser Ile Tyr Ala Glu Asn Ile
 260 265 270
 Asn Thr Thr Ser Leu Thr Cys Ser Ser Asp Arg Met Arg Val Ile
 275 280 285
 Ile Ser Lys Ser Tyr Leu Glu Ala Phe Asn Ser Asn Gly Asn Asn
 290 295 300
 Leu Gln Leu Lys Asp Pro Thr Cys Arg Pro Lys Leu Ser Asn Val
 305 310 315
 Val Glu Phe Ser Val Pro Leu Asn Gly Cys Gly Thr Ile Arg Lys
 320 325 330
 Val Glu Asp Gln Ser Ile Thr Tyr Thr Asn Ile Ile Thr Phe Ser
 335 340 345
 Ala Ser Ser Thr Ser Glu Val Ile Thr Arg Gln Lys Gln Leu Gln
 350 355 360
 Ile Ile Val Lys Cys Glu Met Gly His Asn Ser Thr Val Glu Ile
 365 370 375
 Ile Tyr Ile Thr Glu Asp Asp Val Ile Gln Ser Gln Asn Ala Leu
 380 385 390
 Gly Lys Tyr Asn Thr Ser Met Ala Leu Phe Glu Ser Asn Ser Phe
 395 400 405
 Glu Lys Thr Ile Leu Glu Ser Pro Tyr Tyr Val Asp Leu Asn Gln
 410 415 420
 Thr Leu Phe Val Gln Val Ser Leu His Thr Ser Asp Pro Asn Leu
 425 430 435
 Val Val Phe Leu Asp Thr Cys Arg Ala Ser Pro Thr Ser Asp Phe
 440 445 450
 Ala Ser Pro Thr Tyr Asp Leu Ile Lys Ser Gly Cys Ser Arg Asp
 455 460 465
 Glu Thr Cys Lys Val Tyr Pro Leu Phe Gly His Tyr Gly Arg Phe
 470 475 480
 Gln Phe Asn Ala Phe Lys Phe Leu Arg Ser Met Ser Ser Val Tyr
 485 490 495
 Leu Gln Cys Lys Val Leu Ile Cys Asp Ser Ser Asp His Gln Ser

500

505

510

Arg Cys Asn Gln Gly Cys Val Ser Arg Ser Lys Arg Asp Ile Ser
515 520 525

Ser Tyr Lys Trp Lys Thr Asp Ser Ile Ile Gly Pro Ile Arg Leu
530 535 540

Lys Arg Asp Arg Ser Ala Ser Gly Asn Ser Gly Phe Gln His Glu
545 550 555

Thr His Ala Glu Glu Thr Pro Asn Gln Pro Phe Asn Ser Val His
560 565 570

Leu Phe Ser Phe Met Val Leu Ala Leu Asn Val Val Thr Val Ala
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<213> Artificial Sequence

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<400> 191

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<210> 192

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 192

tttgaatgacg attcgaaggt gg 22

<210> 193

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 193

ggaaggatcc ttcaccagcc ccaattaccc aaagccgcat cctgagc 47

<210> 194

<211> 2362

<212> DNA

<213> Homo Sapien

<400> 194

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<211> 467

<212> PRT

<213> Homo Sapien

<400> 195

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 65 70 75
 Trp Tyr Trp Gln Lys Glu Lys Ile Pro Lys Tyr Val Glu Phe Met
 80 85 90
 Lys Asp Asn Tyr Pro Pro Ser Phe Lys Tyr Glu Asp Phe Gly Pro
 95 100 105
 Leu Phe Thr Ala Lys Phe Phe Asn Ala Asn Gln Trp Ala Asp Ile
 110 115 120
 Phe Gln Ala Ser Gly Ala Lys Tyr Ile Val Leu Thr Ser Lys His
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125

130

135

His Glu Gly Phe Thr Leu Trp Gly Ser Glu Tyr Ser Trp Asn Trp
 140 145 150

Asn Ala Ile Asp Glu Gly Pro Lys Arg Asp Ile Val Lys Glu Leu
 155 160 165

Glu Val Ala Ile Arg Asn Arg Thr Asp Leu Arg Phe Gly Leu Tyr
 170 175 180

Tyr Ser Leu Phe Glu Trp Phe His Pro Leu Phe Leu Glu Asp Glu
 185 190 195

Ser Ser Ser Phe His Lys Arg Gln Phe Pro Val Ser Lys Thr Leu
 200 205 210

Pro Glu Leu Tyr Glu Leu Val Asn Asn Tyr Gln Pro Glu Val Leu
 215 220 225

Trp Ser Asp Gly Asp Gly Gly Ala Pro Asp Gln Tyr Trp Asn Ser
 230 235 240

Thr Gly Phe Leu Ala Trp Leu Tyr Asn Glu Ser Pro Val Arg Gly
 245 250 255

Thr Val Val Thr Asn Asp Arg Trp Gly Ala Gly Ser Ile Cys Lys
 260 265 270

His Gly Gly Phe Tyr Thr Cys Ser Asp Arg Tyr Asn Pro Gly His
 275 280 285

Leu Leu Pro His Lys Trp Glu Asn Cys Met Thr Ile Asp Lys Leu
 290 295 300

Ser Trp Gly Tyr Arg Arg Glu Ala Gly Ile Ser Asp Tyr Leu Thr
 305 310 315

Ile Glu Glu Leu Val Lys Gln Leu Val Glu Thr Val Ser Cys Gly
 320 325 330

Gly Asn Leu Leu Met Asn Ile Gly Pro Thr Leu Asp Gly Thr Ile
 335 340 345

Ser Val Val Phe Glu Glu Arg Leu Arg Gln Val Gly Ser Trp Leu
 350 355 360

Lys Val Asn Gly Glu Ala Ile Tyr Glu Thr Tyr Thr Trp Arg Ser
 365 370 375

Gln Asn Asp Thr Val Thr Pro Asp Val Trp Tyr Thr Ser Lys Pro
 380 385 390

Lys Glu Lys Leu Val Tyr Ala Ile Phe Leu Lys Trp Pro Thr Ser
 395 400 405

Gly Gln Leu Phe Leu Gly His Pro Lys Ala Ile Leu Gly Ala Thr
 410 415 420

Glu Val Lys Leu Leu Gly His Gly Gln Pro Leu Asn Trp Ile Ser
 425 430 435

Leu Glu Gln Asn Gly Ile Met Val Glu Leu Pro Gln Leu Thr Ile
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440

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445

450

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<220>
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<400> 196
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<210> 197
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<220>
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<400> 197
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<210> 198
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 198
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<210> 199
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

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<210> 200
<211> 2372
<212> DNA
<213> Homo Sapien

<400> 200
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cctctcatat caccagtggc catctgaggt gtttccttg ctctgaaggg 150

gtaggcacga tggccaggtg cttcagcctg gtgttgcttc tcacttccat 200
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 aaccttaatt tattattaac atacctaaga agtacattgt tacctctata 2250
 taccaaagca cattttaaaa gtgccattaa caaatgtatc actagccctc 2300
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 aattaaagca tttagaaaac tt 2372

<210> 201

<211> 322

<212> PRT

<213> Homo Sapien

<400> 201

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 35 40 45
 Lys Lys Ala Asn Gln Gln Leu Asn Phe Thr Glu Ala Lys Glu Ala
 50 55 60
 Cys Arg Leu Leu Gly Leu Ser Leu Ala Gly Lys Asp Gln Val Glu
 65 70 75
 Thr Ala Leu Lys Ala Ser Phe Glu Thr Cys Ser Tyr Gly Trp Val
 80 85 90
 Gly Asp Gly Phe Val Val Ile Ser Arg Ile Ser Pro Asn Pro Lys
 95 100 105
 Cys Gly Lys Asn Gly Val Gly Val Leu Ile Trp Lys Val Pro Val
 110 115 120
 Ser Arg Gln Phe Ala Ala Tyr Cys Tyr Asn Ser Ser Asp Thr Trp
 125 130 135
 Thr Asn Ser Cys Ile Pro Glu Ile Ile Thr Thr Lys Asp Pro Ile
 140 145 150

P1618P2C2.txt

Phe Asn Thr Gln Thr Ala Thr Gln Thr Thr Glu Phe Ile Val Ser
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170 175 180
Pro Thr Thr Thr Pro Pro Ala Pro Ala Ser Thr Ser Ile Pro Arg
185 190 195
Arg Lys Lys Leu Ile Cys Val Thr Glu Val Phe Met Glu Thr Ser
200 205 210
Thr Met Ser Thr Glu Thr Glu Pro Phe Val Glu Asn Lys Ala Ala
215 220 225
Phe Lys Asn Glu Ala Ala Gly Phe Gly Gly Val Pro Thr Ala Leu
230 235 240
Leu Val Leu Ala Leu Leu Phe Phe Gly Ala Ala Ala Gly Leu Gly
245 250 255
Phe Cys Tyr Val Lys Arg Tyr Val Lys Ala Phe Pro Phe Thr Asn
260 265 270
Lys Asn Gln Gln Lys Glu Met Ile Glu Thr Lys Val Val Lys Glu
275 280 285
Glu Lys Ala Asn Asp Ser Asn Pro Asn Glu Glu Ser Lys Lys Thr
290 295 300
Asp Lys Asn Pro Glu Glu Ser Lys Ser Pro Ser Lys Thr Thr Val
305 310 315
Arg Cys Leu Glu Ala Glu Val
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P1618P2C2.txt

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<210> 206
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<212> DNA
<213> Homo Sapien

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<221> unsure
<222> 973, 977, 996, 1003
<223> unknown base

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tgctgccttc ctactcgtga ggaaactgcc gccgctctgc cacggtctgc 150
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gagatcctga tgtttctcag tgccattgtg atgatgaaga accgcagatc 250
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P1618P2C2.txt

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 aacaaccccc tattttgtgg ggattgagaa ggggtgaata gaggcttgag 1500
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 aagattggga tttccttttg 1620

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<211> 296

<212> PRT

<213> Homo Sapien

<400> 207

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 20 25 30

Leu Leu Ser Ala Ala Phe Leu Leu Val Arg Lys Leu Pro Pro Leu
 35 40 45

Cys His Gly Leu Pro Thr Gln Arg Glu Asp Gly Asn Pro Cys Asp
 50 55 60

Phe Asp Trp Arg Glu Val Glu Ile Leu Met Phe Leu Ser Ala Ile
 65 70 75

Val Met Met Lys Asn Arg Arg Ser Ile Thr Val Glu Gln His Ile
 80 85 90

Gly Asn Ile Phe Met Phe Ser Lys Val Ala Asn Thr Ile Leu Phe
 95 100 105

Phe Arg Leu Asp Ile Arg Met Gly Leu Leu Tyr Ile Thr Leu Cys
 110 115 120

Ile Val Phe Leu Met Thr Cys Lys Pro Pro Leu Tyr Met Gly Pro

| | | | | |
|-----------------|---------------------|---------------------|-----|-----|
| 125 | | 130 | | 135 |
| Glu Tyr Ile Lys | Tyr Phe Asn Asp Lys | Thr Ile Asp Glu Glu | Leu | |
| | 140 | 145 | 150 | |
| Glu Arg Asp Lys | Arg Val Thr Trp Ile | Val Glu Phe Phe Ala | Asn | |
| | 155 | 160 | 165 | |
| Trp Ser Asn Asp | Cys Gln Ser Phe Ala | Pro Ile Tyr Ala Asp | Leu | |
| | 170 | 175 | 180 | |
| Ser Leu Lys Tyr | Asn Cys Thr Gly Leu | Asn Phe Gly Lys Val | Asp | |
| | 185 | 190 | 195 | |
| Val Gly Arg Tyr | Thr Asp Val Ser Thr | Arg Tyr Lys Val Ser | Thr | |
| | 200 | 205 | 210 | |
| Ser Pro Leu Thr | Lys Gln Leu Pro Thr | Leu Ile Leu Phe Gln | Gly | |
| | 215 | 220 | 225 | |
| Gly Lys Glu Ala | Met Arg Arg Pro Gln | Ile Asp Lys Lys Gly | Arg | |
| | 230 | 235 | 240 | |
| Ala Val Ser Trp | Thr Phe Ser Glu Glu | Asn Val Ile Arg Glu | Phe | |
| | 245 | 250 | 255 | |
| Asn Leu Asn Glu | Leu Tyr Gln Arg Ala | Lys Lys Leu Ser Lys | Ala | |
| | 260 | 265 | 270 | |
| Gly Asp Asn Ile | Pro Glu Glu Gln Pro | Val Ala Ser Thr Pro | Thr | |
| | 275 | 280 | 285 | |
| Thr Val Ser Asp | Gly Glu Asn Lys Lys | Asp Lys | | |
| | 290 | 295 | | |

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<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 208

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<210> 209

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 209

tggagacaat atccctgagg 20

<210> 210

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 210

aacagttggc cacagcatgg cagg 24

<210> 211

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 211

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<210> 212

<211> 1985

<212> DNA

<213> Homo Sapien

<400> 212

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acgtttgccc tggggcccca gcctggcccc ggtcaccctg gcatgaggag 100

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actgcccttc tacaacggct tctactactc caacagcgcc aacgaccaga 200

acctaggcaa cggcatggc aaagacctcc ttaatggagt gaagctggtg 250

gtggagacac ccgaggagac cctgttcacc taccaagggg ccagtgtgat 300

cctgccctgc cgctaccgct acgagccggc cctggtctcc ccgcggcgtg 350

tgctgtgtaa atggtggaag ctgtcggaga acggggcccc agagaaggac 400

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<210> 213

<211> 360

<212> PRT

<213> Homo Sapien

<400> 213

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Tyr Gly Leu Pro Phe Tyr Asn Gly Phe Tyr Tyr Ser Asn Ser Ala
 20 25 30

Asn Asp Gln Asn Leu Gly Asn Gly His Gly Lys Asp Leu Leu Asn
 35 40 45

Gly Val Lys Leu Val Val Glu Thr Pro Glu Glu Thr Leu Phe Thr
 50 55 60

Tyr Gln Gly Ala Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu
 65 70 75

Pro Ala Leu Val Ser Pro Arg Arg Val Arg Val Lys Trp Trp Lys
 80 85 90

Leu Ser Glu Asn Gly Ala Pro Glu Lys Asp Val Leu Val Ala Ile
 95 100 105
 Gly Leu Arg His Arg Ser Phe Gly Asp Tyr Gln Gly Arg Val His
 110 115 120
 Leu Arg Gln Asp Lys Glu His Asp Val Ser Leu Glu Ile Gln Asp
 125 130 135
 Leu Arg Leu Glu Asp Tyr Gly Arg Tyr Arg Cys Glu Val Ile Asp
 140 145 150
 Gly Leu Glu Asp Glu Ser Gly Leu Val Glu Leu Glu Leu Arg Gly
 155 160 165
 Val Val Phe Pro Tyr Gln Ser Pro Asn Gly Arg Tyr Gln Phe Asn
 170 175 180
 Phe His Glu Gly Gln Gln Val Cys Ala Glu Gln Ala Ala Val Val
 185 190 195
 Ala Ser Phe Glu Gln Leu Phe Arg Ala Trp Glu Glu Gly Leu Asp
 200 205 210
 Trp Cys Asn Ala Gly Trp Leu Gln Asp Ala Thr Val Gln Tyr Pro
 215 220 225
 Ile Met Leu Pro Arg Gln Pro Cys Gly Gly Pro Gly Leu Ala Pro
 230 235 240
 Gly Val Arg Ser Tyr Gly Pro Arg His Arg Arg Leu His Arg Tyr
 245 250 255
 Asp Val Phe Cys Phe Ala Thr Ala Leu Lys Gly Arg Val Tyr Tyr
 260 265 270
 Leu Glu His Pro Glu Lys Leu Thr Leu Thr Glu Ala Arg Glu Ala
 275 280 285
 Cys Gln Glu Asp Asp Ala Thr Ile Ala Lys Val Gly Gln Leu Phe
 290 295 300
 Ala Ala Trp Lys Phe His Gly Leu Asp Arg Cys Asp Ala Gly Trp
 305 310 315
 Leu Ala Asp Gly Ser Val Arg Tyr Pro Val Val His Pro His Pro
 320 325 330
 Asn Cys Gly Pro Pro Glu Pro Gly Val Arg Ser Phe Gly Phe Pro
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 Asp Pro Gln Ser Arg Leu Tyr Gly Val Tyr Cys Tyr Arg Gln His
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<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 214

tgcttcgcta ctgccctc 18

<210> 215
<211> 18
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<220>
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<400> 215
ttcccttggtg ggttgag 18

<210> 216
<211> 18
<212> DNA
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<220>
<223> Synthetic Oligonucleotide Probe

<400> 216
agggtggaa gccagttc 18

<210> 217
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<223> Synthetic Oligonucleotide Probe

<400> 217
agccagtga gaaatgcg 18

<210> 218
<211> 24
<212> DNA
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<400> 218
tgtccaaagt acacacacct gagg 24

<210> 219
<211> 45
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<210> 220
<211> 1503
<212> DNA
<213> Homo Sapien

<400> 220

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tccccagacg caggccctca tggccagggg aggggtgcacc aggcggcccc 150
cctgagcgac gctccccatg atgacgcca cggaacttc cagtacgacc 200
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<211> 328
 <212> PRT
 <213> Homo Sapien

<400> 221

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 Gln Gly Arg Val His Gln Ala Ala Pro Leu Ser Asp Ala Pro His
 35 40 45
 Asp Asp Ala His Gly Asn Phe Gln Tyr Asp His Glu Ala Phe Leu
 50 55 60
 Gly Arg Glu Val Ala Lys Glu Phe Asp Gln Leu Thr Pro Glu Glu
 65 70 75
 Ser Gln Ala Arg Leu Gly Arg Ile Val Asp Arg Met Asp Arg Ala
 80 85 90
 Gly Asp Gly Asp Gly Trp Val Ser Leu Ala Glu Leu Arg Ala Trp
 95 100 105
 Ile Ala His Thr Gln Gln Arg His Ile Arg Asp Ser Val Ser Ala
 110 115 120
 Ala Trp Asp Thr Tyr Asp Thr Asp Arg Asp Gly Arg Val Gly Trp
 125 130 135
 Glu Glu Leu Arg Asn Ala Thr Tyr Gly His Tyr Ala Pro Gly Glu
 140 145 150
 Glu Phe His Asp Val Glu Asp Ala Glu Thr Tyr Lys Lys Met Leu
 155 160 165
 Ala Arg Asp Glu Arg Arg Phe Arg Val Ala Asp Gln Asp Gly Asp
 170 175 180
 Ser Met Ala Thr Arg Glu Glu Leu Thr Ala Phe Leu His Pro Glu
 185 190 195
 Glu Phe Pro His Met Arg Asp Ile Val Ile Ala Glu Thr Leu Glu
 200 205 210
 Asp Leu Asp Arg Asn Lys Asp Gly Tyr Val Gln Val Glu Glu Tyr
 215 220 225
 Ile Ala Asp Leu Tyr Ser Ala Glu Pro Gly Glu Glu Glu Pro Ala
 230 235 240
 Trp Val Gln Thr Glu Arg Gln Gln Phe Arg Asp Phe Arg Asp Leu
 245 250 255
 Asn Lys Asp Gly His Leu Asp Gly Ser Glu Val Gly His Trp Val
 260 265 270
 Leu Pro Pro Ala Gln Asp Gln Pro Leu Val Glu Ala Asn His Leu
 275 280 285
 Leu His Glu Ser Asp Thr Asp Lys Asp Gly Arg Leu Ser Lys Ala
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290

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295

300

Glu Ile Leu Gly Asn Trp Asn Met Phe Val Gly Ser Gln Ala Thr
305 310 315

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<210> 222

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 222

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<210> 223

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 223

gaaatcctgg gtaattgg 18

<210> 224

<211> 23

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

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<211> 44

<212> DNA

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<400> 225

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<210> 226

<211> 2403

<212> DNA

<213> Homo Sapien

<400> 226

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 aaa 2403

<210> 227

<211> 550

<212> PRT

<213> Homo Sapien

<400> 227

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 Ala Asp Val Leu Cys Pro Gly Gly Cys Pro Leu Glu Glu Phe Ser
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 Val Tyr Gly Asn Ile Val Tyr Ala Ser Val Ser Ser Ile Cys Gly
 65 70 75
 Ala Ala Val His Arg Gly Val Ile Ser Asn Ser Gly Gly Pro Val
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 Arg Val Tyr Ser Leu Pro Gly Arg Glu Asn Tyr Ser Ser Val Asp
 95 100 105
 Ala Asn Gly Ile Gln Ser Gln Met Leu Ser Arg Trp Ser Ala Ser
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 Phe Thr Val Thr Lys Gly Lys Ser Ser Thr Gln Glu Ala Thr Gly
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Gln Ala Val Ser Thr Ala His Pro Pro Thr Gly Lys Arg Leu Lys
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 Lys Thr Pro Glu Lys Lys Thr Gly Asn Lys Asp Cys Lys Ala Asp
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 Gly Ile Gly Thr Glu Gly Pro His Val Gly Leu Val Gln Ala Ser
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 Glu His Pro Lys Ile Glu Phe Tyr Leu Lys Asn Phe Thr Ser Ala
 215 220 225
 Lys Asp Val Leu Phe Ala Ile Lys Glu Val Gly Phe Arg Gly Gly
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 Phe Thr Val Asp Ala Gly Val Arg Lys Gly Ile Pro Lys Val Val
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 Gly Ile Val Ala Arg Glu Phe Gly Val Asn Val Phe Ile Val Ser
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 410 415 420
 Phe Thr Asp Tyr Ser Thr Lys Glu Asn Val Leu Ala Val Ile Arg
 425 430 435
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Ser Phe Thr Val Arg Asn Val Phe Gly Pro Ile Arg Glu Ser Pro
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Asn Lys Asn Phe Leu Val Ile Val Thr Asp Gly Gln Ser Tyr Asp
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Asp Val Gln Gly Pro Ala Ala Ala Ala His Asp Ala Gly Ile Thr
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Ile Phe Ser Val Gly Val Ala Trp Ala Pro Leu Asp Asp Leu Lys
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Asp Met Ala Ser Lys Pro Lys Glu Ser His Ala Phe Phe Thr Arg
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Ile Cys Arg Asp Phe Leu Glu Ser Gln Gln
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<210> 229

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 229

ctgctgtcca caggggag 18

<210> 230

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 230

ccttgaagca tactgctc 18

<210> 231

<211> 18

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<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

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<210> 232
<211> 18
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<213> Artificial Sequence

<220>
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<400> 232
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<210> 233
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<212> DNA
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<400> 233
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P1618P2C2.txt

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<210> 236

<211> 350

<212> PRT

<213> Homo Sapien

<400> 236

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Gln | Arg | Leu | Gly | Ala | Thr | Leu | Leu | Cys | Leu | Leu | Leu | Ala | Ala | 1 | 5 | 10 | 15 |
| Ala | Val | Pro | Thr | Ala | Pro | Ala | Pro | Ala | Pro | Thr | Ala | Thr | Ser | Ala | 20 | 25 | 30 | |
| Pro | Val | Lys | Pro | Gly | Pro | Ala | Leu | Ser | Tyr | Pro | Gln | Glu | Glu | Ala | 35 | 40 | 45 | |
| Thr | Leu | Asn | Glu | Met | Phe | Arg | Glu | Val | Glu | Glu | Leu | Met | Glu | Asp | 50 | 55 | 60 | |
| Thr | Gln | His | Lys | Leu | Arg | Ser | Ala | Val | Glu | Glu | Met | Glu | Ala | Glu | 65 | 70 | 75 | |
| Glu | Ala | Ala | Ala | Lys | Ala | Ser | Ser | Glu | Val | Asn | Leu | Ala | Asn | Leu | 80 | 85 | 90 | |
| Pro | Pro | Ser | Tyr | His | Asn | Glu | Thr | Asn | Thr | Asp | Thr | Lys | Val | Gly | 95 | 100 | 105 | |
| Asn | Asn | Thr | Ile | His | Val | His | Arg | Glu | Ile | His | Lys | Ile | Thr | Asn | 110 | 115 | 120 | |
| Asn | Gln | Thr | Gly | Gln | Met | Val | Phe | Ser | Glu | Thr | Val | Ile | Thr | Ser | 125 | 130 | 135 | |
| Val | Gly | Asp | Glu | Glu | Gly | Arg | Arg | Ser | His | Glu | Cys | Ile | Ile | Asp | 140 | 145 | 150 | |
| Glu | Asp | Cys | Gly | Pro | Ser | Met | Tyr | Cys | Gln | Phe | Ala | Ser | Phe | Gln | 155 | 160 | 165 | |
| Tyr | Thr | Cys | Gln | Pro | Cys | Arg | Gly | Gln | Arg | Met | Leu | Cys | Thr | Arg | 170 | 175 | 180 | |
| Asp | Ser | Glu | Cys | Cys | Gly | Asp | Gln | Leu | Cys | Val | Trp | Gly | His | Cys | 185 | 190 | 195 | |

P1618P2C2.txt

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Lys | Met | Ala | Thr | Arg | Gly | Ser | Asn | Gly | Thr | Ile | Cys | Asp | Asn |
| | | | | 200 | | | | | 205 | | | | | 210 |
| Gln | Arg | Asp | Cys | Gln | Pro | Gly | Leu | Cys | Cys | Ala | Phe | Gln | Arg | Gly |
| | | | | 215 | | | | | 220 | | | | | 225 |
| Leu | Leu | Phe | Pro | Val | Cys | Thr | Pro | Leu | Pro | Val | Glu | Gly | Glu | Leu |
| | | | | 230 | | | | | 235 | | | | | 240 |
| Cys | His | Asp | Pro | Ala | Ser | Arg | Leu | Leu | Asp | Leu | Ile | Thr | Trp | Glu |
| | | | | 245 | | | | | 250 | | | | | 255 |
| Leu | Glu | Pro | Asp | Gly | Ala | Leu | Asp | Arg | Cys | Pro | Cys | Ala | Ser | Gly |
| | | | | 260 | | | | | 265 | | | | | 270 |
| Leu | Leu | Cys | Gln | Pro | His | Ser | His | Ser | Leu | Val | Tyr | Val | Cys | Lys |
| | | | | 275 | | | | | 280 | | | | | 285 |
| Pro | Thr | Phe | Val | Gly | Ser | Arg | Asp | Gln | Asp | Gly | Glu | Ile | Leu | Leu |
| | | | | 290 | | | | | 295 | | | | | 300 |
| Pro | Arg | Glu | Val | Pro | Asp | Glu | Tyr | Glu | Val | Gly | Ser | Phe | Met | Glu |
| | | | | 305 | | | | | 310 | | | | | 315 |
| Glu | Val | Arg | Gln | Glu | Leu | Glu | Asp | Leu | Glu | Arg | Ser | Leu | Thr | Glu |
| | | | | 320 | | | | | 325 | | | | | 330 |
| Glu | Met | Ala | Leu | Gly | Glu | Pro | Ala | Ala | Ala | Ala | Ala | Ala | Leu | Leu |
| | | | | 335 | | | | | 340 | | | | | 345 |
| Gly | Gly | Glu | Glu | Ile | | | | | | | | | | |
| | | | | 350 | | | | | | | | | | |

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<210> 238
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<220>
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<400> 238
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<210> 239
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<220>
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<400> 239
gcagagcgga gatgcagcgg cttg 24

<210> 240
<211> 18
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<220>
<223> Synthetic Oligonucleotide Probe

<400> 240
ttggcagctt catggagg 18

<210> 241
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<220>
<223> Synthetic Oligonucleotide Probe

<400> 241
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<210> 242
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<400> 242
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<223> Synthetic Oligonucleotide Probe

<400> 243
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<210> 244
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P1618P2C2.txt

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<213> Homo Sapien

<400> 245

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| Met | Arg | Leu | Leu | Val | Ala | Pro | Leu | Leu | Leu | Ala | Trp | Val | Ala | Gly | 1 | 5 | 10 | 15 |
| Ala | Thr | Ala | Thr | Val | Pro | Val | Val | Pro | Trp | His | Val | Pro | Cys | Pro | 20 | 25 | 30 | |
| Pro | Gln | Cys | Ala | Cys | Gln | Ile | Arg | Pro | Trp | Tyr | Thr | Pro | Arg | Ser | 35 | 40 | 45 | |
| Ser | Tyr | Arg | Glu | Ala | Thr | Thr | Val | Asp | Cys | Asn | Asp | Leu | Phe | Leu | 50 | 55 | 60 | |
| Thr | Ala | Val | Pro | Pro | Ala | Leu | Pro | Ala | Gly | Thr | Gln | Thr | Leu | Leu | 65 | 70 | 75 | |
| Leu | Gln | Ser | Asn | Ser | Ile | Val | Arg | Val | Asp | Gln | Ser | Glu | Leu | Gly | 80 | 85 | 90 | |
| Tyr | Leu | Ala | Asn | Leu | Thr | Glu | Leu | Asp | Leu | Ser | Gln | Asn | Ser | Phe | 95 | 100 | 105 | |
| Ser | Asp | Ala | Arg | Asp | Cys | Asp | Phe | His | Ala | Leu | Pro | Gln | Leu | Leu | 110 | 115 | 120 | |
| Ser | Leu | His | Leu | Glu | Glu | Asn | Gln | Leu | Thr | Arg | Leu | Glu | Asp | His | 125 | 130 | 135 | |
| Ser | Phe | Ala | Gly | Leu | Ala | Ser | Leu | Gln | Glu | Leu | Tyr | Leu | Asn | His | 140 | 145 | 150 | |
| Asn | Gln | Leu | Tyr | Arg | Ile | Ala | Pro | Arg | Ala | Phe | Ser | Gly | Leu | Ser | 155 | 160 | 165 | |
| Asn | Leu | Leu | Arg | Leu | His | Leu | Asn | Ser | Asn | Leu | Leu | Arg | Ala | Ile | 170 | 175 | 180 | |
| Asp | Ser | Arg | Trp | Phe | Glu | Met | Leu | Pro | Asn | Leu | Glu | Ile | Leu | Met | 185 | 190 | 195 | |
| Ile | Gly | Gly | Asn | Lys | Val | Asp | Ala | Ile | Leu | Asp | Met | Asn | Phe | Arg | 200 | 205 | 210 | |
| Pro | Leu | Ala | Asn | Leu | Arg | Ser | Leu | Val | Leu | Ala | Gly | Met | Asn | Leu | 215 | 220 | 225 | |

P1618P2C2.txt

Arg Glu Ile Ser Asp Tyr Ala Leu Glu Gly Leu Gln Ser Leu Glu
230 235 240

Ser Leu Ser Phe Tyr Asp Asn Gln Leu Ala Arg Val Pro Arg Arg
245 250 255

Ala Leu Glu Gln Val Pro Gly Leu Lys Phe Leu Asp Leu Asn Lys
260 265 270

Asn Pro Leu Gln Arg Val Gly Pro Gly Asp Phe Ala Asn Met Leu
275 280 285

His Leu Lys Glu Leu Gly Leu Asn Asn Met Glu Glu Leu Val Ser
290 295 300

Ile Asp Lys Phe Ala Leu Val Asn Leu Pro Glu Leu Thr Lys Leu
305 310 315

Asp Ile Thr Asn Asn Pro Arg Leu Ser Phe Ile His Pro Arg Ala
320 325 330

Phe His His Leu Pro Gln Met Glu Thr Leu Met Leu Asn Asn Asn
335 340 345

Ala Leu Ser Ala Leu His Gln Gln Thr Val Glu Ser Leu Pro Asn
350 355 360

Leu Gln Glu Val Gly Leu His Gly Asn Pro Ile Arg Cys Asp Cys
365 370 375

Val Ile Arg Trp Ala Asn Ala Thr Gly Thr Arg Val Arg Phe Ile
380 385 390

Glu Pro Gln Ser Thr Leu Cys Ala Glu Pro Pro Asp Leu Gln Arg
395 400 405

Leu Pro Val Arg Glu Val Pro Phe Arg Glu Met Thr Asp His Cys
410 415 420

Leu Pro Leu Ile Ser Pro Arg Ser Phe Pro Pro Ser Leu Gln Val
425 430 435

Ala Ser Gly Glu Ser Met Val Leu His Cys Arg Ala Leu Ala Glu
440 445 450

Pro Glu Pro Glu Ile Tyr Trp Val Thr Pro Ala Gly Leu Arg Leu
455 460 465

Thr Pro Ala His Ala Gly Arg Arg Tyr Arg Val Tyr Pro Glu Gly
470 475 480

Thr Leu Glu Leu Arg Arg Val Thr Ala Glu Glu Ala Gly Leu Tyr
485 490 495

Thr Cys Val Ala Gln Asn Leu Val Gly Ala Asp Thr Lys Thr Val
500 505 510

Ser Val Val Val Gly Arg Ala Leu Leu Gln Pro Gly Arg Asp Glu
515 520 525

Gly Gln Gly Leu Glu Leu Arg Val Gln Glu Thr His Pro Tyr His
530 535 540

P1618P2C2.txt

Ile Leu Leu Ser Trp Val Thr Pro Pro Asn Thr Val Ser Thr Asn
545 550 555
Leu Thr Trp Ser Ser Ala Ser Ser Leu Arg Gly Gln Gly Ala Thr
560 565 570
Ala Leu Ala Arg Leu Pro Arg Gly Thr His Ser Tyr Asn Ile Thr
575 580 585
Arg Leu Leu Gln Ala Thr Glu Tyr Trp Ala Cys Leu Gln Val Ala
590 595 600
Phe Ala Asp Ala His Thr Gln Leu Ala Cys Val Trp Ala Arg Thr
605 610 615
Lys Glu Ala Thr Ser Cys His Arg Ala Leu Gly Asp Arg Pro Gly
620 625 630
Leu Ile Ala Ile Leu Ala Leu Ala Val Leu Leu Leu Ala Ala Gly
635 640 645
Leu Ala Ala His Leu Gly Thr Gly Gln Pro Arg Lys Gly Val Gly
650 655 660
Gly Arg Arg Pro Leu Pro Pro Ala Trp Ala Phe Trp Gly Trp Ser
665 670 675
Ala Pro Ser Val Arg Val Val Ser Ala Pro Leu Val Leu Pro Trp
680 685 690
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<210> 246

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<223> Synthetic Oligonucleotide Probe

<400> 246

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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 247

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<210> 248

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 248

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<210> 249

<211> 3401

<212> DNA

<213> Homo Sapien

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aaggacaaca acctcaagac catcgaggag atcatcagct tccagcacct 1200
gcaccgcctc acctgcctta agctgtggta caaccacatc gcctacatcc 1250

P1618P2C2.txt

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aacggtgctc cattcgcacc tcccctctc gtgcctgccc tgcctctcca 2850

P1618P2C2.txt

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 cccacctcct gcggcatggg tgtgtccagt gccaccgctg gcctccgctg 2950
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 ttttctgcgt cgtgtcattg gatataatcc tcagaaataa tgcacactag 3300
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 agactcggtc acagtatcaa ataaaatcta taacagaaaa aaaaaaaaaa 3400
 a 3401

<210> 250
 <211> 546
 <212> PRT
 <213> Homo Sapien

<400> 250
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 20 25 30
 Cys Thr Val Asp Ile Glu Ser Leu Thr Gly Tyr Arg Thr Tyr Arg
 35 40 45
 Cys Ala His Pro Leu Ala Thr Leu Phe Lys Ile Leu Ala Ser Phe
 50 55 60
 Tyr Ile Ser Leu Val Ile Phe Tyr Gly Leu Ile Cys Met Tyr Thr
 65 70 75
 Leu Trp Trp Met Leu Arg Arg Ser Leu Lys Lys Tyr Ser Phe Glu
 80 85 90
 Ser Ile Arg Glu Glu Ser Ser Tyr Ser Asp Ile Pro Asp Val Lys
 95 100 105
 Asn Asp Phe Ala Phe Met Leu His Leu Ile Asp Gln Tyr Asp Pro
 110 115 120
 Leu Tyr Ser Lys Arg Phe Ala Val Phe Leu Ser Glu Val Ser Glu
 125 130 135
 Asn Lys Leu Arg Gln Leu Asn Leu Asn Asn Glu Trp Thr Leu Asp
 140 145 150
 Lys Leu Arg Gln Arg Leu Thr Lys Asn Ala Gln Asp Lys Leu Glu
 155 160 165

P1618P2C2.txt

Leu His Leu Phe Met Leu Ser Gly Ile Pro Asp Thr Val Phe Asp
 170 175 180
 Leu Val Glu Leu Glu Val Leu Lys Leu Glu Leu Ile Pro Asp Val
 185 190 195
 Thr Ile Pro Pro Ser Ile Ala Gln Leu Thr Gly Leu Lys Glu Leu
 200 205 210
 Trp Leu Tyr His Thr Ala Ala Lys Ile Glu Ala Pro Ala Leu Ala
 215 220 225
 Phe Leu Arg Glu Asn Leu Arg Ala Leu His Ile Lys Phe Thr Asp
 230 235 240
 Ile Lys Glu Ile Pro Leu Trp Ile Tyr Ser Leu Lys Thr Leu Glu
 245 250 255
 Glu Leu His Leu Thr Gly Asn Leu Ser Ala Glu Asn Asn Arg Tyr
 260 265 270
 Ile Val Ile Asp Gly Leu Arg Glu Leu Lys Arg Leu Lys Val Leu
 275 280 285
 Arg Leu Lys Ser Asn Leu Ser Lys Leu Pro Gln Val Val Thr Asp
 290 295 300
 Val Gly Val His Leu Gln Lys Leu Ser Ile Asn Asn Glu Gly Thr
 305 310 315
 Lys Leu Ile Val Leu Asn Ser Leu Lys Lys Met Ala Asn Leu Thr
 320 325 330
 Glu Leu Glu Leu Ile Arg Cys Asp Leu Glu Arg Ile Pro His Ser
 335 340 345
 Ile Phe Ser Leu His Asn Leu Gln Glu Ile Asp Leu Lys Asp Asn
 350 355 360
 Asn Leu Lys Thr Ile Glu Glu Ile Ile Ser Phe Gln His Leu His
 365 370 375
 Arg Leu Thr Cys Leu Lys Leu Trp Tyr Asn His Ile Ala Tyr Ile
 380 385 390
 Pro Ile Gln Ile Gly Asn Leu Thr Asn Leu Glu Arg Leu Tyr Leu
 395 400 405
 Asn Arg Asn Lys Ile Glu Lys Ile Pro Thr Gln Leu Phe Tyr Cys
 410 415 420
 Arg Lys Leu Arg Tyr Leu Asp Leu Ser His Asn Asn Leu Thr Phe
 425 430 435
 Leu Pro Ala Asp Ile Gly Leu Leu Gln Asn Leu Gln Asn Leu Ala
 440 445 450
 Ile Thr Ala Asn Arg Ile Glu Thr Leu Pro Pro Glu Leu Phe Gln
 455 460 465
 Cys Arg Lys Leu Arg Ala Leu His Leu Gly Asn Asn Val Leu Gln
 470 475 480

P1618P2C2.txt

Ser Leu Pro Ser Arg Val Gly Glu Leu Thr Asn Leu Thr Gln Ile
485 490 495
Glu Leu Arg Gly Asn Arg Leu Glu Cys Leu Pro Val Glu Leu Gly
500 505 510
Glu Cys Pro Leu Leu Lys Arg Ser Gly Leu Val Val Glu Glu Asp
515 520 525
Leu Phe Asn Thr Leu Pro Pro Glu Val Lys Glu Arg Leu Trp Arg
530 535 540
Ala Asp Lys Glu Gln Ala
545

<210> 251
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 251
caacaatgag ggcaccaagc 20

<210> 252
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 252
gatggctagg ttctggaggt tctg 24

<210> 253
<211> 47
<212> DNA
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<223> Synthetic Oligonucleotide Probe

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<210> 254
<211> 1650
<212> DNA
<213> Homo sapien

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<210> 255

<211> 452

<212> PRT

<213> Homo Sapien

<400> 255

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Trp Pro Thr Glu Glu Gly Lys Glu Val Trp Asp Tyr Val Thr Val
          35          40          45
Arg Lys Asp Ala Tyr Met Phe Trp Trp Leu Tyr Tyr Ala Thr Asn
          50          55          60
Ser Cys Lys Asn Phe Ser Glu Leu Pro Leu Val Met Trp Leu Gln
          65          70          75
Gly Gly Pro Gly Gly Ser Ser Thr Gly Phe Gly Asn Phe Glu Glu
          80          85          90
Ile Gly Pro Leu Asp Ser Asp Leu Lys Pro Arg Lys Thr Thr Trp
          95          100          105
Leu Gln Ala Ala Ser Leu Leu Phe Val Asp Asn Pro Val Gly Thr
          110          115          120
Gly Phe Ser Tyr Val Asn Gly Ser Gly Ala Tyr Ala Lys Asp Leu
          125          130          135
Ala Met Val Ala Ser Asp Met Met Val Leu Leu Lys Thr Phe Phe
          140          145          150
Ser Cys His Lys Glu Phe Gln Thr Val Pro Phe Tyr Ile Phe Ser
          155          160          165
Glu Ser Tyr Gly Gly Lys Met Ala Ala Gly Ile Gly Leu Glu Leu
          170          175          180
Tyr Lys Ala Ile Gln Arg Gly Thr Ile Lys Cys Asn Phe Ala Gly
          185          190          195
Val Ala Leu Gly Asp Ser Trp Ile Ser Pro Val Asp Ser Val Leu
          200          205          210
Ser Trp Gly Pro Tyr Leu Tyr Ser Met Ser Leu Leu Glu Asp Lys
          215          220          225
Gly Leu Ala Glu Val Ser Lys Val Ala Glu Gln Val Leu Asn Ala
          230          235          240
Val Asn Lys Gly Leu Tyr Arg Glu Ala Thr Glu Leu Trp Gly Lys
          245          250          255
Ala Glu Met Ile Ile Glu Gln Asn Thr Asp Gly Val Asn Phe Tyr
          260          265          270
Asn Ile Leu Thr Lys Ser Thr Pro Thr Ser Thr Met Glu Ser Ser
          275          280          285
Leu Glu Phe Thr Gln Ser His Leu Val Cys Leu Cys Gln Arg His
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Val Arg His Leu Gln Arg Asp Ala Leu Ser Gln Leu Met Asn Gly
          305          310          315

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P1618P2C2.txt

| | | | | | |
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| Pro Ile Arg Lys | Lys 320 | Leu Lys Ile Ile | Pro 325 | Glu Asp Gln Ser | Trp 330 |
| Gly Gly Gln Ala | Thr 335 | Asn Val Phe Val | Asn 340 | Met Glu Glu Asp | Phe 345 |
| Met Lys Pro Val | Ile 350 | Ser Ile Val Asp | Glu 355 | Leu Leu Glu Ala | Gly 360 |
| Ile Asn Val Thr | Val 365 | Tyr Asn Gly Gln | Leu 370 | Asp Leu Ile Val | Asp 375 |
| Thr Met Gly Gln | Glu 380 | Ala Trp Val Arg | Lys 385 | Leu Lys Trp Pro | Glu 390 |
| Leu Pro Lys Phe | Ser 395 | Gln Leu Lys Trp | Lys 400 | Ala Leu Tyr Ser | Asp 405 |
| Pro Lys Ser Leu | Glu 410 | Thr Ser Ala Phe | Val 415 | Lys Ser Tyr Lys | Asn 420 |
| Leu Ala Phe Tyr | Trp 425 | Ile Leu Lys Ala | Gly 430 | His Met Val Pro | Ser 435 |
| Asp Gln Gly Asp | Met 440 | Ala Leu Lys Met | Met 445 | Arg Leu Val Thr | Gln 450 |

Gln Glu

<210> 256
 <211> 1100
 <212> DNA
 <213> Homo Sapien

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 ccgttatcag gaccatgcgg ccgacgggtc atcacgtcgc gcatcgtggg 150
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 ttgatgcctt gcagggcatt cttcaaaaaa aaaaaaaaaa aaaaaaaaaa 1100

<210> 257

<211> 314

<212> PRT

<213> Homo Sapien

<400> 257

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 35 40 45
 Glu Asp Ala Glu Leu Gly Arg Trp Pro Trp Gln Gly Ser Leu Arg
 50 55 60
 Leu Trp Asp Ser His Val Cys Gly Val Ser Leu Leu Ser His Arg
 65 70 75
 Trp Ala Leu Thr Ala Ala His Cys Phe Glu Thr Tyr Ser Asp Leu
 80 85 90
 Ser Asp Pro Ser Gly Trp Met Val Gln Phe Gly Gln Leu Thr Ser
 95 100 105
 Met Pro Ser Phe Trp Ser Leu Gln Ala Tyr Tyr Thr Arg Tyr Phe
 110 115 120
 Val Ser Asn Ile Tyr Leu Ser Pro Arg Tyr Leu Gly Asn Ser Pro
 125 130 135
 Tyr Asp Ile Ala Leu Val Lys Leu Ser Ala Pro Val Thr Tyr Thr
 140 145 150
 Lys His Ile Gln Pro Ile Cys Leu Gln Ala Ser Thr Phe Glu Phe
 155 160 165
 Glu Asn Arg Thr Asp Cys Trp Val Thr Gly Trp Gly Tyr Ile Lys
 170 175 180
 Glu Asp Glu Ala Leu Pro Ser Pro His Thr Leu Gln Glu Val Gln
 185 190 195

P1618P2C2.txt

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ala | Ile | Ile | Asn | Asn | Ser | Met | Cys | Asn | His | Leu | Phe | Leu | Lys |
| | | | | 200 | | | | | 205 | | | | | 210 |
| Tyr | Ser | Phe | Arg | Lys | Asp | Ile | Phe | Gly | Asp | Met | Val | Cys | Ala | Gly |
| | | | | 215 | | | | | 220 | | | | | 225 |
| Asn | Ala | Gln | Gly | Gly | Lys | Asp | Ala | Cys | Phe | Gly | Asp | Ser | Gly | Gly |
| | | | | 230 | | | | | 235 | | | | | 240 |
| Pro | Leu | Ala | Cys | Asn | Lys | Asn | Gly | Leu | Trp | Tyr | Gln | Ile | Gly | Val |
| | | | | 245 | | | | | 250 | | | | | 255 |
| Val | Ser | Trp | Gly | Val | Gly | Cys | Gly | Arg | Pro | Asn | Arg | Pro | Gly | Val |
| | | | | 260 | | | | | 265 | | | | | 270 |
| Tyr | Thr | Asn | Ile | Ser | His | His | Phe | Glu | Trp | Ile | Gln | Lys | Leu | Met |
| | | | | 275 | | | | | 280 | | | | | 285 |
| Ala | Gln | Ser | Gly | Met | Ser | Gln | Pro | Asp | Pro | Ser | Trp | Pro | Leu | Leu |
| | | | | 290 | | | | | 295 | | | | | 300 |
| Phe | Phe | Pro | Leu | Leu | Trp | Ala | Leu | Pro | Leu | Leu | Gly | Pro | Val | |
| | | | | 305 | | | | | 310 | | | | | |

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 <211> 2427
 <212> DNA
 <213> Homo Sapien

<400> 258
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 cggagcccga ccagcggagg acgctgcccc caggctgggt gtccctgggc 150
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Val Arg Ser Pro His Pro Tyr Gln Leu Pro Gln Ala Leu Ala Pro
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Ser Leu Arg Gln Arg Pro Glu Pro Gln Val Thr Gly Thr Val Gly
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Leu His Leu Gly Val Thr Pro Ser Val Ile Arg Lys Arg Tyr Asn
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260 265 270
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275

280

285

| | | | |
|-----------------|---------------------|-------------------------|-----|
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| Ala Leu Pro His | Val His Thr Val Ser | Tyr Gly Asp Asp Glu Asp | |
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| Ser Leu Ser Ser | Ala Tyr Ile Gln Arg | Val Asn Thr Glu Leu Met | |
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| Lys Ala Ala Ala | Arg Gly Leu Thr Leu | Leu Phe Ala Ser Gly Asp | |
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| Ser Gly Ala Gly | Cys Trp Ser Val Ser | Gly Arg His Gln Phe Arg | |
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| | 380 | 385 | 390 |
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| | 395 | 400 | 405 |
| Tyr Ile Ser Gly | Gly Gly Phe Ser Asn | Val Phe Pro Arg Pro Ser | |
| | 410 | 415 | 420 |
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| Leu Pro Pro Ser | Ser Tyr Phe Asn Ala | Ser Gly Arg Ala Tyr Pro | |
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| Asp Val Ala Ala | Leu Ser Asp Gly Tyr | Trp Val Val Ser Asn Arg | |
| | 455 | 460 | 465 |
| Val Pro Ile Pro | Trp Val Ser Gly Thr | Ser Ala Ser Thr Pro Val | |
| | 470 | 475 | 480 |
| Phe Gly Gly Ile | Leu Ser Leu Ile Asn | Glu His Arg Ile Leu Ser | |
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| Gly Arg Pro Pro | Leu Gly Phe Leu Asn | Pro Arg Leu Tyr Gln Gln | |
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| His Gly Ala Gly | Leu Phe Asp Val Thr | Arg Gly Cys His Glu Ser | |
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<400> 261

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| Lys | Pro | Lys | Phe | Lys | Asp | Gly | Gly | Arg | Gly | Ala | Asn | Asp | Ser | Thr | |
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| Ser | Ala | Met | Pro | Glu | Gln | Met | Lys | Phe | Gln | Trp | Ile | Arg | Val | Lys | |
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| Ile | Gly | Met | Asp | Tyr | Asp | Tyr | Ala | Leu | Leu | Glu | Leu | Lys | Lys | Pro | |
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 50 55 60
 Trp Pro Trp Ile Val Ser Ile Gln Lys Asn Gly Thr His His Cys
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 Ala Gly Ser Leu Leu Thr Ser Arg Trp Val Ile Thr Ala Ala His
 80 85 90
 Cys Phe Lys Asp Asn Leu Asn Lys Pro Tyr Leu Phe Ser Val Leu
 95 100 105
 Leu Gly Ala Trp Gln Leu Gly Asn Pro Gly Ser Arg Ser Gln Lys
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 Glu Gly Ala Cys Ala Asp Ile Ala Leu Val Arg Leu Glu Arg Ser
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 Ile Gln Phe Ser Glu Arg Val Leu Pro Ile Cys Leu Pro Asp Ala
 155 160 165

P1618P2C2.txt

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| Gly | Ser | Ile | Gln | Asp | Gly | Val | Pro | Leu | Pro | His | Pro | Gln | Thr | Leu |
| | | | | 185 | | | | | 190 | | | | | 195 |
| Gln | Lys | Leu | Lys | Val | Pro | Ile | Ile | Asp | Ser | Glu | Val | Cys | Ser | His |
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| Asp | Ser | Gly | Gly | Pro | Leu | Met | Cys | Gln | Val | Asp | Gly | Ala | Trp | Leu |
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| Leu | Ala | Gly | Ile | Ile | Ser | Trp | Gly | Glu | Gly | Cys | Ala | Glu | Arg | Asn |
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| Arg | Pro | Gly | Val | Tyr | Ile | Ser | Leu | Ser | Ala | His | Arg | Ser | Trp | Val |
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<213> Homo Sapien

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P1618P2C2.txt

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 <212> PRT
 <213> Homo Sapien

<400> 285
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 Glu Glu Lys Arg Leu Met Val Glu Leu His Asn Leu Tyr Arg Ala
 35 40 45
 Gln Val Ser Pro Thr Ala Ser Asp Met Leu His Met Arg Trp Asp
 50 55 60
 Glu Glu Leu Ala Ala Phe Ala Lys Ala Tyr Ala Arg Gln Cys Val
 65 70 75
 Trp Gly His Asn Lys Glu Arg Gly Arg Arg Gly Glu Asn Leu Phe
 80 85 90
 Ala Ile Thr Asp Glu Gly Met Asp Val Pro Leu Ala Met Glu Glu
 95 100 105
 Trp His His Glu Arg Glu His Tyr Asn Leu Ser Ala Ala Thr Cys
 110 115 120
 Ser Pro Gly Gln Met Cys Gly His Tyr Thr Gln Val Val Trp Ala
 125 130 135
 Lys Thr Glu Arg Ile Gly Cys Gly Ser His Phe Cys Glu Lys Leu
 140 145 150

P1618P2C2.txt

| | | |
|-----------------|-------------------------|-------------------------|
| Gln Gly Val Glu | Glu Thr Asn Ile Glu | Leu Leu Val Cys Asn Tyr |
| 155 | 160 | 165 |
| Glu Pro Pro Gly | Asn Val Lys Gly Lys Arg | Pro Tyr Gln Glu Gly |
| 170 | 175 | 180 |
| Thr Pro Cys Ser | Gln Cys Pro Ser Gly Tyr | His Cys Lys Asn Ser |
| 185 | 190 | 195 |
| Leu Cys Glu Pro | Ile Gly Ser Pro Glu Asp | Ala Gln Asp Leu Pro |
| 200 | 205 | 210 |
| Tyr Leu Val Thr | Glu Ala Pro Ser Phe Arg | Ala Thr Glu Ala Ser |
| 215 | 220 | 225 |
| Asp Ser Arg Lys | Met Gly Thr Pro Ser Ser | Leu Ala Thr Gly Ile |
| 230 | 235 | 240 |
| Pro Ala Phe Leu | Val Thr Glu Val Ser Gly | Ser Leu Ala Thr Lys |
| 245 | 250 | 255 |
| Ala Leu Pro Ala | Val Glu Thr Gln Ala Pro | Thr Ser Leu Ala Thr |
| 260 | 265 | 270 |
| Lys Asp Pro Pro | Ser Met Ala Thr Glu Ala | Pro Pro Cys Val Thr |
| 275 | 280 | 285 |
| Thr Glu Val Pro | Ser Ile Leu Ala Ala His | Ser Leu Pro Ser Leu |
| 290 | 295 | 300 |
| Asp Glu Glu Pro | Val Thr Phe Pro Lys Ser | Thr His Val Pro Ile |
| 305 | 310 | 315 |
| Pro Lys Ser Ala | Asp Lys Val Thr Asp Lys | Thr Lys Val Pro Ser |
| 320 | 325 | 330 |
| Arg Ser Pro Glu | Asn Ser Leu Asp Pro Lys | Met Ser Leu Thr Gly |
| 335 | 340 | 345 |
| Ala Arg Glu Leu | Leu Pro His Ala Gln Glu | Glu Ala Glu Ala Glu |
| 350 | 355 | 360 |
| Ala Glu Leu Pro | Pro Ser Ser Glu Val Leu | Ala Ser Val Phe Pro |
| 365 | 370 | 375 |
| Ala Gln Asp Lys | Pro Gly Glu Leu Gln Ala | Thr Leu Asp His Thr |
| 380 | 385 | 390 |
| Gly His Thr Ser | Ser Lys Ser Leu Pro Asn | Phe Pro Asn Thr Ser |
| 395 | 400 | 405 |
| Ala Thr Ala Asn | Ala Thr Gly Gly Arg Ala | Leu Ala Leu Gln Ser |
| 410 | 415 | 420 |
| Ser Leu Pro Gly | Ala Glu Gly Pro Asp Lys | Pro Ser Val Val Ser |
| 425 | 430 | 435 |
| Gly Leu Asn Ser | Gly Pro Gly His Val Trp | Gly Pro Leu Leu Gly |
| 440 | 445 | 450 |
| Leu Leu Leu Leu | Pro Pro Leu Val Leu Ala | Gly Ile Phe |
| 455 | 460 | |

<210> 286
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 286
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<210> 287
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 287
 ctcatattgc acaccagtaa ttcg 24

<210> 288
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 288
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<210> 289
 <211> 3662
 <212> DNA
 <213> Homo Sapien

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 caaggcaagt tccatgagcc accttcaaag ctttcgagaa gtgaaactga 200
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 aaccgaaaca agattaaaaa tgtagatgga ctgacattcc aaggccttgg 600

P1618P2C2.txt

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cctgggagtt ctgccagaag ctcagtgagc tggacctaac tttcaatcac 850
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actgcacatt gggaacaaca gagtcagcta cattgctgat tgtgccttcc 950
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actcagatgt cagtgatgct gggaaataca catgtgagat gtctaacc 2200

P1618P2C2.txt

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 gaaaatgagt tactaaagca ttttaaataa tacctgcctt gtaccatttt 3600
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<210> 290
 <211> 1059

<212> PRT

<213> Homo Sapien

<400> 290

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Val | Asp | Val | Leu | Leu | Leu | Phe | Ser | Leu | Cys | Leu | Leu | Phe | His | 1 | 5 | 10 | 15 |
| Ile | Ser | Arg | Pro | Asp | Leu | Ser | His | Asn | Arg | Leu | Ser | Phe | Ile | Lys | 20 | 25 | 30 | |
| Ala | Ser | Ser | Met | Ser | His | Leu | Gln | Ser | Leu | Arg | Glu | Val | Lys | Leu | 35 | 40 | 45 | |
| Asn | Asn | Asn | Glu | Leu | Glu | Thr | Ile | Pro | Asn | Leu | Gly | Pro | Val | Ser | 50 | 55 | 60 | |
| Ala | Asn | Ile | Thr | Leu | Leu | Ser | Leu | Ala | Gly | Asn | Arg | Ile | Val | Glu | 65 | 70 | 75 | |
| Ile | Leu | Pro | Glu | His | Leu | Lys | Glu | Phe | Gln | Ser | Leu | Glu | Thr | Leu | 80 | 85 | 90 | |
| Asp | Leu | Ser | Ser | Asn | Asn | Ile | Ser | Glu | Leu | Gln | Thr | Ala | Phe | Pro | 95 | 100 | 105 | |
| Ala | Leu | Gln | Leu | Lys | Tyr | Leu | Tyr | Leu | Asn | Ser | Asn | Arg | Val | Thr | 110 | 115 | 120 | |
| Ser | Met | Glu | Pro | Gly | Tyr | Phe | Asp | Asn | Leu | Ala | Asn | Thr | Leu | Leu | 125 | 130 | 135 | |
| Val | Leu | Lys | Leu | Asn | Arg | Asn | Arg | Ile | Ser | Ala | Ile | Pro | Pro | Lys | 140 | 145 | 150 | |
| Met | Phe | Lys | Leu | Pro | Gln | Leu | Gln | His | Leu | Glu | Leu | Asn | Arg | Asn | 155 | 160 | 165 | |
| Lys | Ile | Lys | Asn | Val | Asp | Gly | Leu | Thr | Phe | Gln | Gly | Leu | Gly | Ala | 170 | 175 | 180 | |
| Leu | Lys | Ser | Leu | Lys | Met | Gln | Arg | Asn | Gly | Val | Thr | Lys | Leu | Met | 185 | 190 | 195 | |
| Asp | Gly | Ala | Phe | Trp | Gly | Leu | Ser | Asn | Met | Glu | Ile | Leu | Gln | Leu | 200 | 205 | 210 | |
| Asp | His | Asn | Asn | Leu | Thr | Glu | Ile | Thr | Lys | Gly | Trp | Leu | Tyr | Gly | 215 | 220 | 225 | |
| Leu | Leu | Met | Leu | Gln | Glu | Leu | His | Leu | Ser | Gln | Asn | Ala | Ile | Asn | 230 | 235 | 240 | |
| Arg | Ile | Ser | Pro | Asp | Ala | Trp | Glu | Phe | Cys | Gln | Lys | Leu | Ser | Glu | 245 | 250 | 255 | |
| Leu | Asp | Leu | Thr | Phe | Asn | His | Leu | Ser | Arg | Leu | Asp | Asp | Ser | Ser | 260 | 265 | 270 | |
| Phe | Leu | Gly | Leu | Ser | Leu | Leu | Asn | Thr | Leu | His | Ile | Gly | Asn | Asn | 275 | 280 | 285 | |
| Arg | Val | Ser | Tyr | Ile | Ala | Asp | Cys | Ala | Phe | Arg | Gly | Leu | Ser | Ser | 290 | 295 | 300 | |

P1618P2C2.txt

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Lys | Thr | Leu | Asp | Leu | Lys | Asn | Asn | Glu | Ile | Ser | Trp | Thr | Ile |
| | | | | 305 | | | | | 310 | | | | | 315 |
| Glu | Asp | Met | Asn | Gly | Ala | Phe | Ser | Gly | Leu | Asp | Lys | Leu | Arg | Arg |
| | | | | 320 | | | | | 325 | | | | | 330 |
| Leu | Ile | Leu | Gln | Gly | Asn | Arg | Ile | Arg | Ser | Ile | Thr | Lys | Lys | Ala |
| | | | | 335 | | | | | 340 | | | | | 345 |
| Phe | Thr | Gly | Leu | Asp | Ala | Leu | Glu | His | Leu | Asp | Leu | Ser | Asp | Asn |
| | | | | 350 | | | | | 355 | | | | | 360 |
| Ala | Ile | Met | Ser | Leu | Gln | Gly | Asn | Ala | Phe | Ser | Gln | Met | Lys | Lys |
| | | | | 365 | | | | | 370 | | | | | 375 |
| Leu | Gln | Gln | Leu | His | Leu | Asn | Thr | Ser | Ser | Leu | Leu | Cys | Asp | Cys |
| | | | | 380 | | | | | 385 | | | | | 390 |
| Gln | Leu | Lys | Trp | Leu | Pro | Gln | Trp | Val | Ala | Glu | Asn | Asn | Phe | Gln |
| | | | | 395 | | | | | 400 | | | | | 405 |
| Ser | Phe | Val | Asn | Ala | Ser | Cys | Ala | His | Pro | Gln | Leu | Leu | Lys | Gly |
| | | | | 410 | | | | | 415 | | | | | 420 |
| Arg | Ser | Ile | Phe | Ala | Val | Ser | Pro | Asp | Gly | Phe | Val | Cys | Asp | Asp |
| | | | | 425 | | | | | 430 | | | | | 435 |
| Phe | Pro | Lys | Pro | Gln | Ile | Thr | Val | Gln | Pro | Glu | Thr | Gln | Ser | Ala |
| | | | | 440 | | | | | 445 | | | | | 450 |
| Ile | Lys | Gly | Ser | Asn | Leu | Ser | Phe | Ile | Cys | Ser | Ala | Ala | Ser | Ser |
| | | | | 455 | | | | | 460 | | | | | 465 |
| Ser | Asp | Ser | Pro | Met | Thr | Phe | Ala | Trp | Lys | Lys | Asp | Asn | Glu | Leu |
| | | | | 470 | | | | | 475 | | | | | 480 |
| Leu | His | Asp | Ala | Glu | Met | Glu | Asn | Tyr | Ala | His | Leu | Arg | Ala | Gln |
| | | | | 485 | | | | | 490 | | | | | 495 |
| Gly | Gly | Glu | Val | Met | Glu | Tyr | Thr | Thr | Ile | Leu | Arg | Leu | Arg | Glu |
| | | | | 500 | | | | | 505 | | | | | 510 |
| Val | Glu | Phe | Ala | Ser | Glu | Gly | Lys | Tyr | Gln | Cys | Val | Ile | Ser | Asn |
| | | | | 515 | | | | | 520 | | | | | 525 |
| His | Phe | Gly | Ser | Ser | Tyr | Ser | Val | Lys | Ala | Lys | Leu | Thr | Val | Asn |
| | | | | 530 | | | | | 535 | | | | | 540 |
| Met | Leu | Pro | Ser | Phe | Thr | Lys | Thr | Pro | Met | Asp | Leu | Thr | Ile | Arg |
| | | | | 545 | | | | | 550 | | | | | 555 |
| Ala | Gly | Ala | Met | Ala | Arg | Leu | Glu | Cys | Ala | Ala | Val | Gly | His | Pro |
| | | | | 560 | | | | | 565 | | | | | 570 |
| Ala | Pro | Gln | Ile | Ala | Trp | Gln | Lys | Asp | Gly | Gly | Thr | Asp | Phe | Pro |
| | | | | 575 | | | | | 580 | | | | | 585 |
| Ala | Ala | Arg | Glu | Arg | Arg | Met | His | Val | Met | Pro | Glu | Asp | Asp | Val |
| | | | | 590 | | | | | 595 | | | | | 600 |
| Phe | Phe | Ile | Val | Asp | Val | Lys | Ile | Glu | Asp | Ile | Gly | Val | Tyr | Ser |
| | | | | 605 | | | | | 610 | | | | | 615 |

P1618P2C2.txt

| | | | |
|-----------------|---------------------|---------------------|-----|
| Cys Thr Ala Gln | Asn Ser Ala Gly Ser | Ile Ser Ala Asn Ala | Thr |
| | 620 | 625 | 630 |
| Leu Thr Val Leu | Glu Thr Pro Ser Phe | Leu Arg Pro Leu Leu | Asp |
| | 635 | 640 | 645 |
| Arg Thr Val Thr | Lys Gly Glu Thr Ala | Val Leu Gln Cys Ile | Ala |
| | 650 | 655 | 660 |
| Gly Gly Ser Pro | Pro Pro Lys Leu Asn | Trp Thr Lys Asp Asp | Ser |
| | 665 | 670 | 675 |
| Pro Leu Val Val | Thr Glu Arg His Phe | Phe Ala Ala Gly Asn | Gln |
| | 680 | 685 | 690 |
| Leu Leu Ile Ile | Val Asp Ser Asp Val | Ser Asp Ala Gly Lys | Tyr |
| | 695 | 700 | 705 |
| Thr Cys Glu Met | Ser Asn Thr Leu Gly | Thr Glu Arg Gly Asn | Val |
| | 710 | 715 | 720 |
| Arg Leu Ser Val | Ile Pro Thr Pro Thr | Cys Asp Ser Pro Gln | Met |
| | 725 | 730 | 735 |
| Thr Ala Pro Ser | Leu Asp Asp Asp Gly | Trp Ala Thr Val Gly | Val |
| | 740 | 745 | 750 |
| Val Ile Ile Ala | Val Val Cys Cys Val | Val Gly Thr Ser Leu | Val |
| | 755 | 760 | 765 |
| Trp Val Val Ile | Ile Tyr His Thr Arg | Arg Arg Asn Glu Asp | Cys |
| | 770 | 775 | 780 |
| Ser Ile Thr Asn | Thr Asp Glu Thr Asn | Leu Pro Ala Asp Ile | Pro |
| | 785 | 790 | 795 |
| Ser Tyr Leu Ser | Ser Gln Gly Thr Leu | Ala Asp Arg Gln Asp | Gly |
| | 800 | 805 | 810 |
| Tyr Val Ser Ser | Glu Ser Gly Ser His | His Gln Phe Val Thr | Ser |
| | 815 | 820 | 825 |
| Ser Gly Ala Gly | Phe Phe Leu Pro Gln | His Asp Ser Ser Gly | Thr |
| | 830 | 835 | 840 |
| Cys His Ile Asp | Asn Ser Ser Glu Ala | Asp Val Glu Ala Ala | Thr |
| | 845 | 850 | 855 |
| Asp Leu Phe Leu | Cys Pro Phe Leu Gly | Ser Thr Gly Pro Met | Tyr |
| | 860 | 865 | 870 |
| Leu Lys Gly Asn | Val Tyr Gly Ser Asp | Pro Phe Glu Thr Tyr | His |
| | 875 | 880 | 885 |
| Thr Gly Cys Ser | Pro Asp Pro Arg Thr | Val Leu Met Asp His | Tyr |
| | 890 | 895 | 900 |
| Glu Pro Ser Tyr | Ile Lys Lys Lys Glu | Cys Tyr Pro Cys Ser | His |
| | 905 | 910 | 915 |
| Pro Ser Glu Glu | Ser Cys Glu Arg Ser | Phe Ser Asn Ile Ser | Trp |
| | 920 | 925 | 930 |

P1618P2C2.txt

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|
| Pro | Ser | His | Val | Arg | Lys | Leu | Leu | Asn | Thr | Ser | Tyr | Ser | His | Asn |
| | | | | 935 | | | | | 940 | | | | | 945 |
| Glu | Gly | Pro | Gly | Met | Lys | Asn | Leu | Cys | Leu | Asn | Lys | Ser | Ser | Leu |
| | | | | 950 | | | | | 955 | | | | | 960 |
| Asp | Phe | Ser | Ala | Asn | Pro | Glu | Pro | Ala | Ser | Val | Ala | Ser | Ser | Asn |
| | | | | 965 | | | | | 970 | | | | | 975 |
| Ser | Phe | Met | Gly | Thr | Phe | Gly | Lys | Ala | Leu | Arg | Arg | Pro | His | Leu |
| | | | | 980 | | | | | 985 | | | | | 990 |
| Asp | Ala | Tyr | Ser | Ser | Phe | Gly | Gln | Pro | Ser | Asp | Cys | Gln | Pro | Arg |
| | | | | 995 | | | | | 1000 | | | | | 1005 |
| Ala | Phe | Tyr | Leu | Lys | Ala | His | Ser | Ser | Pro | Asp | Leu | Asp | Ser | Gly |
| | | | | 1010 | | | | | 1015 | | | | | 1020 |
| Ser | Glu | Glu | Asp | Gly | Lys | Glu | Arg | Thr | Asp | Phe | Gln | Glu | Glu | Asn |
| | | | | 1025 | | | | | 1030 | | | | | 1035 |
| His | Ile | Cys | Thr | Phe | Lys | Gln | Thr | Leu | Glu | Asn | Tyr | Arg | Thr | Pro |
| | | | | 1040 | | | | | 1045 | | | | | 1050 |
| Asn | Phe | Gln | Ser | Tyr | Asp | Leu | Asp | Thr | | | | | | |
| | | | | 1055 | | | | | | | | | | |

<210> 291
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 <213> Homo Sapien

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 tggaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200
 acacagggag cattcaagaa tgaaataaac cagagttaga cccgcggggg 250
 ttggtgtgtt ctgacataaa taaataatct taaagcagct gttcccctcc 300
 ccacccccaa aaaaaaggat gattggaaat gaagaaccga ggattcaca 350
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400
 gatatttttg gaatgaaaag tttggggcct ttttagtaaa gttaaagaact 450
 ggtgtggttg tgttttcctt tctttttgaa tttcccacaa gaggagagga 500
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550
 gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650
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 atgcgttttc tcttgttctt aaccacctgg atttccatct ggatgttgct 750

P1618P2C2.txt

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tgtctaaact gaaggagctc tggttgcgaa acaaccccat tgaaagcatc 1300
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P1618P2C2.txt

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 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550
 catggaaagc cacctgcccc tgcttgctat cgagcatgag cacctaaatc 2600
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 caaaaaacaa acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaaacia 2850
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 caaaaa 2906

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 <212> PRT
 <213> Homo Sapien

<400> 292
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 35 40 45
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
 50 55 60
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
 65 70 75
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile
 80 85 90

Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
 95 100 105
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe
 110 115 120
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg
 125 130 135
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu
 140 145 150
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser

P1618P2C2.txt

| 155 | 160 | 165 |
|---|-----|-----|
| Tyr Ala Phe Asn Arg Ile Pro Ser Leu Arg Arg Leu Asp Leu Gly | 170 | 180 |
| Glu Leu Lys Arg Leu Ser Tyr Ile Ser Glu Gly Ala Phe Glu Gly | 185 | 195 |
| Leu Ser Asn Leu Arg Tyr Leu Asn Leu Ala Met Cys Asn Leu Arg | 200 | 210 |
| Glu Ile Pro Asn Leu Thr Pro Leu Ile Lys Leu Asp Glu Leu Asp | 215 | 225 |
| Leu Ser Gly Asn His Leu Ser Ala Ile Arg Pro Gly Ser Phe Gln | 230 | 240 |
| Gly Leu Met His Leu Gln Lys Leu Trp Met Ile Gln Ser Gln Ile | 245 | 255 |
| Gln Val Ile Glu Arg Asn Ala Phe Asp Asn Leu Gln Ser Leu Val | 260 | 270 |
| Glu Ile Asn Leu Ala His Asn Asn Leu Thr Leu Leu Pro His Asp | 275 | 285 |
| Leu Phe Thr Pro Leu His His Leu Glu Arg Ile His Leu His His | 290 | 300 |
| Asn Pro Trp Asn Cys Asn Cys Asp Ile Leu Trp Leu Ser Trp Trp | 305 | 315 |
| Ile Lys Asp Met Ala Pro Ser Asn Thr Ala Cys Cys Ala Arg Cys | 320 | 330 |
| Asn Thr Pro Pro Asn Leu Lys Gly Arg Tyr Ile Gly Glu Leu Asp | 335 | 345 |
| Gln Asn Tyr Phe Thr Cys Tyr Ala Pro Val Ile Val Glu Pro Pro | 350 | 360 |
| Ala Asp Leu Asn Val Thr Glu Gly Met Ala Ala Glu Leu Lys Cys | 365 | 375 |
| Arg Ala Ser Thr Ser Leu Thr Ser Val Ser Trp Ile Thr Pro Asn | 380 | 390 |
| Gly Thr Val Met Thr His Gly Ala Tyr Lys Val Arg Ile Ala Val | 395 | 405 |
| Leu Ser Asp Gly Thr Leu Asn Phe Thr Asn Val Thr Val Gln Asp | 410 | 420 |
| Thr Gly Met Tyr Thr Cys Met Val Ser Asn Ser Val Gly Asn Thr | 425 | 435 |
| Thr Ala Ser Ala Thr Leu Asn Val Thr Ala Ala Thr Thr Thr Pro | 440 | 450 |
| Phe Ser Tyr Phe Ser Thr Val Thr Val Glu Thr Met Glu Pro Ser | 455 | 465 |
| Gln Asp Glu Ala Arg Thr Thr Asp Asn Asn Val Gly Pro Thr Pro | | |

| 470 | 475 | 480 |
|-----------------|-------------------------|-------------------------|
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| 485 | 490 | 495 |
| Gln Ser Thr Arg | Ser Thr Glu Lys Thr | Phe Thr Ile Pro Val Thr |
| 500 | 505 | 510 |
| Asp Ile Asn Ser | Gly Ile Pro Gly Ile | Asp Glu Val Met Lys Thr |
| 515 | 520 | 525 |
| Thr Lys Ile Ile | Ile Gly Cys Phe Val | Ala Ile Thr Leu Met Ala |
| 530 | 535 | 540 |
| Ala Val Met Leu | Val Ile Phe Tyr Lys | Met Arg Lys Gln His His |
| 545 | 550 | 555 |
| Arg Gln Asn His | His Ala Pro Thr Arg | Thr Val Glu Ile Ile Asn |
| 560 | 565 | 570 |
| Val Asp Asp Glu | Ile Thr Gly Asp Thr | Pro Met Glu Ser His Leu |
| 575 | 580 | 585 |
| Pro Met Pro Ala | Ile Glu His Glu His | Leu Asn His Tyr Asn Ser |
| 590 | 595 | 600 |
| Tyr Lys Ser Pro | Phe Asn His Thr Thr | Thr Val Asn Thr Ile Asn |
| 605 | 610 | 615 |
| Ser Ile His Ser | Ser Val His Glu Pro | Leu Leu Ile Arg Met Asn |
| 620 | 625 | 630 |
| Ser Lys Asp Asn | Val Gln Glu Thr Gln Ile | |
| 635 | 640 | |

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 <211> 4053
 <212> DNA
 <213> Homo Sapien

<400> 293
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 aaagaaggaa ttgaccgggc agcgcgaggg aggagcgcgc acgcgaccgc 150
 gagggcgggc gtgcaccctc ggctggaagt ttgtgccggg ccccgagcgc 200
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aatactccct gaacatctga aagagtttca gtcccttgaa actttggacc 700
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P1618P2C2.txt

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P1618P2C2.txt

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 35 40 45
 Pro Cys Pro Thr Thr Cys Arg Cys Leu Gly Asp Leu Leu Asp Cys
 50 55 60
 Ser Arg Lys Arg Leu Ala Arg Leu Pro Glu Pro Leu Pro Ser Trp
 65 70 75
 Val Ala Arg Leu Asp Leu Ser His Asn Arg Leu Ser Phe Ile Lys
 80 85 90
 Ala Ser Ser Met Ser His Leu Gln Ser Leu Arg Glu Val Lys Leu
 95 100 105
 Asn Asn Asn Glu Leu Glu Thr Ile Pro Asn Leu Gly Pro Val Ser
 110 115 120
 Ala Asn Ile Thr Leu Leu Ser Leu Ala Gly Asn Arg Ile Val Glu
 125 130 135
 Ile Leu Pro Glu His Leu Lys Glu Phe Gln Ser Leu Glu Thr Leu
 140 145 150
 Asp Leu Ser Ser Asn Asn Ile Ser Glu Leu Gln Thr Ala Phe Pro
 155 160 165
 Ala Leu Gln Leu Lys Tyr Leu Tyr Leu Asn Ser Asn Arg Val Thr
 170 175 180
 Ser Met Glu Pro Gly Tyr Phe Asp Asn Leu Ala Asn Thr Leu Leu
 185 190 195
 Val Leu Lys Leu Asn Arg Asn Arg Ile Ser Ala Ile Pro Pro Lys
 200 205 210

P1618P2C2.txt

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Met | Phe | Lys | Leu | Pro | Gln | Leu | Gln | His | Leu | Glu | Leu | Asn | Arg | Asn | |
| | | | | 215 | | | | | 220 | | | | | 225 | |
| Lys | Ile | Lys | Asn | Val | Asp | Gly | Leu | Thr | Phe | Gln | Gly | Leu | Gly | Ala | |
| | | | | 230 | | | | | 235 | | | | | 240 | |
| Leu | Lys | Ser | Leu | Lys | Met | Gln | Arg | Asn | Gly | Val | Thr | Lys | Leu | Met | |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Asp | Gly | Ala | Phe | Trp | Gly | Leu | Ser | Asn | Met | Glu | Ile | Leu | Gln | Leu | |
| | | | | 260 | | | | | 265 | | | | | 270 | |
| Asp | His | Asn | Asn | Leu | Thr | Glu | Ile | Thr | Lys | Gly | Trp | Leu | Tyr | Gly | |
| | | | | 275 | | | | | 280 | | | | | 285 | |
| Leu | Leu | Met | Leu | Gln | Glu | Leu | His | Leu | Ser | Gln | Asn | Ala | Ile | Asn | |
| | | | | 290 | | | | | 295 | | | | | 300 | |
| Arg | Ile | Ser | Pro | Asp | Ala | Trp | Glu | Phe | Cys | Gln | Lys | Leu | Ser | Glu | |
| | | | | 305 | | | | | 310 | | | | | 315 | |
| Leu | Asp | Leu | Thr | Phe | Asn | His | Leu | Ser | Arg | Leu | Asp | Asp | Ser | Ser | |
| | | | | 320 | | | | | 325 | | | | | 330 | |
| Phe | Leu | Gly | Leu | Ser | Leu | Leu | Asn | Thr | Leu | His | Ile | Gly | Asn | Asn | |
| | | | | 335 | | | | | 340 | | | | | 345 | |
| Arg | Val | Ser | Tyr | Ile | Ala | Asp | Cys | Ala | Phe | Arg | Gly | Leu | Ser | Ser | |
| | | | | 350 | | | | | 355 | | | | | 360 | |
| Leu | Lys | Thr | Leu | Asp | Leu | Lys | Asn | Asn | Glu | Ile | Ser | Trp | Thr | Ile | |
| | | | | 365 | | | | | 370 | | | | | 375 | |
| Glu | Asp | Met | Asn | Gly | Ala | Phe | Ser | Gly | Leu | Asp | Lys | Leu | Arg | Arg | |
| | | | | 380 | | | | | 385 | | | | | 390 | |
| Leu | Ile | Leu | Gln | Gly | Asn | Arg | Ile | Arg | Ser | Ile | Thr | Lys | Lys | Ala | |
| | | | | 395 | | | | | 400 | | | | | 405 | |
| Phe | Thr | Gly | Leu | Asp | Ala | Leu | Glu | His | Leu | Asp | Leu | Ser | Asp | Asn | |
| | | | | 410 | | | | | 415 | | | | | 420 | |
| Ala | Ile | Met | Ser | Leu | Gln | Gly | Asn | Ala | Phe | Ser | Gln | Met | Lys | Lys | |
| | | | | 425 | | | | | 430 | | | | | 435 | |
| Leu | Gln | Gln | Leu | His | Leu | Asn | Thr | Ser | Ser | Leu | Leu | Cys | Asp | Cys | |
| | | | | 440 | | | | | 445 | | | | | 450 | |
| Gln | Leu | Lys | Trp | Leu | Pro | Gln | Trp | Val | Ala | Glu | Asn | Asn | Phe | Gln | |
| | | | | 455 | | | | | 460 | | | | | 465 | |
| Ser | Phe | Val | Asn | Ala | Ser | Cys | Ala | His | Pro | Gln | Leu | Leu | Lys | Gly | |
| | | | | 470 | | | | | 475 | | | | | 480 | |
| Arg | Ser | Ile | Phe | Ala | Val | Ser | Pro | Asp | Gly | Phe | Val | Cys | Asp | Asp | |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Phe | Pro | Lys | Pro | Gln | Ile | Thr | Val | Gln | Pro | Glu | Thr | Gln | Ser | Ala | |
| | | | | 500 | | | | | 505 | | | | | 510 | |
| Ile | Lys | Gly | Ser | Asn | Leu | Ser | Phe | Ile | Cys | Ser | Ala | Ala | Ser | Ser | |
| | | | | 515 | | | | | 520 | | | | | 525 | |

P1618P2C2.txt

| | | | |
|-----------------|---------------------|---------------------|-----|
| Ser Asp Ser Pro | Met Thr Phe Ala Trp | Lys Lys Asp Asn Glu | Leu |
| | 530 | 535 | 540 |
| Leu His Asp Ala | Glu Met Glu Asn Tyr | Ala His Leu Arg Ala | Gln |
| | 545 | 550 | 555 |
| Gly Gly Glu Val | Met Glu Tyr Thr Thr | Ile Leu Arg Leu Arg | Glu |
| | 560 | 565 | 570 |
| Val Glu Phe Ala | Ser Glu Gly Lys Tyr | Gln Cys Val Ile Ser | Asn |
| | 575 | 580 | 585 |
| His Phe Gly Ser | Ser Tyr Ser Val Lys | Ala Lys Leu Thr Val | Asn |
| | 590 | 595 | 600 |
| Met Leu Pro Ser | Phe Thr Lys Thr Pro | Met Asp Leu Thr Ile | Arg |
| | 605 | 610 | 615 |
| Ala Gly Ala Met | Ala Arg Leu Glu Cys | Ala Ala Val Gly His | Pro |
| | 620 | 625 | 630 |
| Ala Pro Gln Ile | Ala Trp Gln Lys Asp | Gly Gly Thr Asp Phe | Pro |
| | 635 | 640 | 645 |
| Ala Ala Arg Glu | Arg Arg Met His Val | Met Pro Glu Asp Asp | Val |
| | 650 | 655 | 660 |
| Phe Phe Ile Val | Asp Val Lys Ile Glu | Asp Ile Gly Val Tyr | Ser |
| | 665 | 670 | 675 |
| Cys Thr Ala Gln | Asn Ser Ala Gly Ser | Ile Ser Ala Asn Ala | Thr |
| | 680 | 685 | 690 |
| Leu Thr Val Leu | Glu Thr Pro Ser Phe | Leu Arg Pro Leu Leu | Asp |
| | 695 | 700 | 705 |
| Arg Thr Val Thr | Lys Gly Glu Thr Ala | Val Leu Gln Cys Ile | Ala |
| | 710 | 715 | 720 |
| Gly Gly Ser Pro | Pro Pro Lys Leu Asn | Trp Thr Lys Asp Asp | Ser |
| | 725 | 730 | 735 |
| Pro Leu Val Val | Thr Glu Arg His Phe | Phe Ala Ala Gly Asn | Gln |
| | 740 | 745 | 750 |
| Leu Leu Ile Ile | Val Asp Ser Asp Val | Ser Asp Ala Gly Lys | Tyr |
| | 755 | 760 | 765 |
| Thr Cys Glu Met | Ser Asn Thr Leu Gly | Thr Glu Arg Gly Asn | Val |
| | 770 | 775 | 780 |
| Arg Leu Ser Val | Ile Pro Thr Pro Thr | Cys Asp Ser Pro Gln | Met |
| | 785 | 790 | 795 |
| Thr Ala Pro Ser | Leu Asp Asp Asp Gly | Trp Ala Thr Val Gly | Val |
| | 800 | 805 | 810 |
| Val Ile Ile Ala | Val Val Cys Cys Val | Val Gly Thr Ser Leu | Val |
| | 815 | 820 | 825 |
| Trp Val Val Ile | Ile Tyr His Thr Arg | Arg Arg Asn Glu Asp | Cys |
| | 830 | 835 | 840 |

P1618P2C2.txt

Ser Ile Thr Asn Thr Asp Glu Thr Asn Leu Pro Ala Asp Ile Pro
845 850 855

Ser Tyr Leu Ser Ser Gln Gly Thr Leu Ala Asp Arg Gln Asp Gly
860 865 870

Tyr Val Ser Ser Glu Ser Gly Ser His His Gln Phe Val Thr Ser
875 880 885

Ser Gly Ala Gly Phe Phe Leu Pro Gln His Asp Ser Ser Gly Thr
890 895 900

Cys His Ile Asp Asn Ser Ser Glu Ala Asp Val Glu Ala Ala Thr
905 910 915

Asp Leu Phe Leu Cys Pro Phe Leu Gly Ser Thr Gly Pro Met Tyr
920 925 930

Leu Lys Gly Asn Val Tyr Gly Ser Asp Pro Phe Glu Thr Tyr His
935 940 945

Thr Gly Cys Ser Pro Asp Pro Arg Thr Val Leu Met Asp His Tyr
950 955 960

Glu Pro Ser Tyr Ile Lys Lys Lys Glu Cys Tyr Pro Cys Ser His
965 970 975

Pro Ser Glu Glu Ser Cys Glu Arg Ser Phe Ser Asn Ile Ser Trp
980 985 990

Pro Ser His Val Arg Lys Leu Leu Asn Thr Ser Tyr Ser His Asn
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<212> DNA
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<400> 297
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<210> 298
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<400> 307
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<210> 309
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 <212> DNA
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<211> 22

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<211> 45

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

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<210> 314

<211> 3003

<212> DNA

<213> Homo Sapien

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 at 3003

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 35 40 45
 Trp Gly Trp Ala Arg Gln Ser Trp Gly Gln Cys Gln Pro Val Cys
 50 55 60
 Gln Pro Arg Cys Lys His Gly Glu Cys Ile Gly Pro Asn Lys Cys
 65 70 75
 Lys Cys His Pro Gly Tyr Ala Gly Lys Thr Cys Asn Gln Asp Leu
 80 85 90
 Asn Glu Cys Gly Leu Lys Pro Arg Pro Cys Lys His Arg Cys Met
 95 100 105
 Asn Thr Tyr Gly Ser Tyr Lys Cys Tyr Cys Leu Asn Gly Tyr Met
 110 115 120
 Leu Met Pro Asp Gly Ser Cys Ser Ser Ala Leu Thr Cys Ser Met
 125 130 135
 Ala Asn Cys Gln Tyr Gly Cys Asp Val Val Lys Gly Gln Ile Arg
 140 145 150
 Cys Gln Cys Pro Ser Pro Gly Leu His Leu Ala Pro Asp Gly Arg
 155 160 165
 Thr Cys Val Asp Val Asp Glu Cys Ala Thr Gly Arg Ala Ser Cys
 170 175 180
 Pro Arg Phe Arg Gln Cys Val Asn Thr Phe Gly Ser Tyr Ile Cys
 185 190 195

P1618P2C2.txt

| | | | | | | | | | | | | | | |
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| | | | | 200 | | | | | 205 | | | | | 210 |
| Gln | Cys | His | Asp | Ile | Asp | Glu | Cys | Ser | Leu | Gly | Gln | Tyr | Gln | Cys |
| | | | | 215 | | | | | 220 | | | | | 225 |
| Ser | Ser | Phe | Ala | Arg | Cys | Tyr | Asn | Val | Arg | Gly | Ser | Tyr | Lys | Cys |
| | | | | 230 | | | | | 235 | | | | | 240 |
| Lys | Cys | Lys | Glu | Gly | Tyr | Gln | Gly | Asp | Gly | Leu | Thr | Cys | Val | Tyr |
| | | | | 245 | | | | | 250 | | | | | 255 |
| Ile | Pro | Lys | Val | Met | Ile | Glu | Pro | Ser | Gly | Pro | Ile | His | Val | Pro |
| | | | | 260 | | | | | 265 | | | | | 270 |
| Lys | Gly | Asn | Gly | Thr | Ile | Leu | Lys | Gly | Asp | Thr | Gly | Asn | Asn | Asn |
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| Trp | Ile | Pro | Asp | Val | Gly | Ser | Thr | Trp | Trp | Pro | Pro | Lys | Thr | Pro |
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| Tyr | Ile | Pro | Pro | Ile | Ile | Thr | Asn | Arg | Pro | Thr | Ser | Lys | Pro | Thr |
| | | | | 305 | | | | | 310 | | | | | 315 |
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| | | | | 335 | | | | | 340 | | | | | 345 |
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| Gly | Gln | Tyr | Leu | Thr | Val | Ser | Ala | Ala | Lys | Ala | Pro | Gly | Gly | Lys |
| | | | | 425 | | | | | 430 | | | | | 435 |
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| | | | | 455 | | | | | 460 | | | | | 465 |
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| | | | | 470 | | | | | 475 | | | | | 480 |
| Ala | Leu | Trp | Gly | Arg | Asn | Gly | Gly | His | Gly | Trp | Arg | Gln | Thr | Gln |
| | | | | 485 | | | | | 490 | | | | | 495 |
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<400> 317
 ttgcacttgt aggaccacg tacg 24

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<400> 320

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| Met | Trp | Leu | Lys | Val | Phe | Thr | Thr | Phe | Leu | Ser | Phe | Ala | Thr | Gly | 1 | 5 | 10 | 15 |
| Ala | Cys | Ser | Gly | Leu | Lys | Val | Thr | Val | Pro | Ser | His | Thr | Val | His | 20 | 25 | 30 | |
| Gly | Val | Arg | Gly | Gln | Ala | Leu | Tyr | Leu | Pro | Val | His | Tyr | Gly | Phe | 35 | 40 | 45 | |
| His | Thr | Pro | Ala | Ser | Asp | Ile | Gln | Ile | Ile | Trp | Leu | Phe | Glu | Arg | 50 | 55 | 60 | |
| Pro | His | Thr | Met | Pro | Lys | Tyr | Leu | Leu | Gly | Ser | Val | Asn | Lys | Ser | 65 | 70 | 75 | |
| Val | Val | Pro | Asp | Leu | Glu | Tyr | Gln | His | Lys | Phe | Thr | Met | Met | Pro | 80 | 85 | 90 | |
| Pro | Asn | Ala | Ser | Leu | Leu | Ile | Asn | Pro | Leu | Gln | Phe | Pro | Asp | Glu | 95 | 100 | 105 | |
| Gly | Asn | Tyr | Ile | Val | Lys | Val | Asn | Ile | Gln | Gly | Asn | Gly | Thr | Leu | 110 | 115 | 120 | |
| Ser | Ala | Ser | Gln | Lys | Ile | Gln | Val | Thr | Val | Asp | Asp | Pro | Val | Thr | 125 | 130 | 135 | |
| Lys | Pro | Val | Val | Gln | Ile | His | Pro | Pro | Ser | Gly | Ala | Val | Glu | Tyr | 140 | 145 | 150 | |
| Val | Gly | Asn | Met | Thr | Leu | Thr | Cys | His | Val | Glu | Gly | Gly | Thr | Arg | 155 | 160 | 165 | |
| Leu | Ala | Tyr | Gln | Trp | Leu | Lys | Asn | Gly | Arg | Pro | Val | His | Thr | Ser | 170 | 175 | 180 | |
| Ser | Thr | Tyr | Ser | Phe | Ser | Pro | Gln | Asn | Asn | Thr | Leu | His | Ile | Ala | 185 | 190 | 195 | |
| Pro | Val | Thr | Lys | Glu | Asp | Ile | Gly | Asn | Tyr | Ser | Cys | Leu | Val | Arg | 200 | 205 | 210 | |
| Asn | Pro | Val | Ser | Glu | Met | Glu | Ser | Asp | Ile | Ile | Met | Pro | Ile | Ile | 215 | 220 | 225 | |
| Tyr | Tyr | Gly | Pro | Tyr | Gly | Leu | Gln | Val | Asn | Ser | Asp | Lys | Gly | Leu | 230 | 235 | 240 | |
| Lys | Val | Gly | Glu | Val | Phe | Thr | Val | Asp | Leu | Gly | Glu | Ala | Ile | Leu | 245 | 250 | 255 | |
| Phe | Asp | Cys | Ser | Ala | Asp | Ser | His | Pro | Pro | Asn | Thr | Tyr | Ser | Trp | 260 | 265 | 270 | |
| Ile | Arg | Arg | Thr | Asp | Asn | Thr | Thr | Tyr | Ile | Ile | Lys | His | Gly | Pro | 275 | 280 | 285 | |
| Arg | Leu | Glu | Val | Ala | Ser | Glu | Lys | Val | Ala | Gln | Lys | Thr | Met | Asp | | | | |

290

295

300

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 Ala Gln Lys Gly Lys Ser Leu Ser Pro Leu Ala Ser Ile Thr Gly
 335 340 345
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 Lys Lys Tyr Gln Pro Tyr Lys Val Ile Lys Gln Lys Leu Glu Gly
 365 370 375
 Arg Pro Glu Thr Glu Tyr Arg Lys Ala Gln Thr Phe Ser Gly His
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 Glu Asp Ala Leu Asp Asp Phe Gly Ile Tyr Glu Phe Val Ala Phe
 395 400 405
 Pro Asp Val Ser Gly Val Ser Arg Ile Pro Ser Arg Ser Val Pro
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<223> Synthetic Oligonucleotide Probe

<400> 322

cactgacagg gttcctcacc cagg 24

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<211> 45

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 323

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<210> 324

<211> 2397

<212> DNA

<213> Homo Sapien

<400> 324

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tggaatgatag aattttatgc cccgtgggtg cctgcttgctc aaaatcttca 200
accggaatgg gaaagttttg ctgaatgggg agaagatctt gaggttaata 250
ttgcgaaagt agatgtcaca gagcagccag gactgagtgg acggtttatc 300
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 35 40 45

Asp Trp Met Ile Glu Phe Tyr Ala Pro Trp Cys Pro Ala Cys Gln
 50 55 60

Asn Leu Gln Pro Glu Trp Glu Ser Phe Ala Glu Trp Gly Glu Asp
 65 70 75

Leu Glu Val Asn Ile Ala Lys Val Asp Val Thr Glu Gln Pro Gly
 Page 210

P1618P2C2.txt

80

85

90

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Cys Lys Asp Gly Glu Phe Arg Arg Tyr Gln Gly Pro Arg Thr Lys
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Lys Asp Phe Ile Asn Phe Ile Ser Asp Lys Glu Trp Lys Ser Ile
125 130 135

Glu Pro Val Ser Ser Trp Phe Gly Pro Gly Ser Val Leu Met Ser
140 145 150

Ser Met Ser Ala Leu Phe Gln Leu Ser Met Trp Ile Arg Thr Cys
155 160 165

His Asn Tyr Phe Ile Glu Asp Leu Gly Leu Pro Val Trp Gly Ser
170 175 180

Tyr Thr Val Phe Ala Leu Ala Thr Leu Phe Ser Gly Leu Leu Leu
185 190 195

Gly Leu Cys Met Ile Phe Val Ala Asp Cys Leu Cys Pro Ser Lys
200 205 210

Arg Arg Arg Pro Gln Pro Tyr Pro Tyr Pro Ser Lys Lys Leu Leu
215 220 225

Ser Glu Ser Ala Gln Pro Leu Lys Lys Val Glu Glu Glu Gln Glu
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Ala Asp Glu Glu Asp Val Ser Glu Glu Glu Ala Glu Ser Lys Glu
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<400> 329
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 <212> PRT
 <213> Homo Sapien

<400> 332

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| Met | Lys | Leu | Trp | Val | Ser | Ala | Leu | Leu | Met | Ala | Trp | Phe | Gly | Val | 1 | 5 | 10 | 15 |
| Leu | Ser | Cys | Val | Gln | Ala | Glu | Phe | Phe | Thr | Ser | Ile | Gly | His | Met | 20 | 25 | 30 | |
| Thr | Asp | Leu | Ile | Tyr | Ala | Glu | Lys | Glu | Leu | Val | Gln | Ser | Leu | Lys | 35 | 40 | 45 | |
| Glu | Tyr | Ile | Leu | Val | Glu | Glu | Ala | Lys | Leu | Ser | Lys | Ile | Lys | Ser | 50 | 55 | 60 | |
| Trp | Ala | Asn | Lys | Met | Glu | Ala | Leu | Thr | Ser | Lys | Ser | Ala | Ala | Asp | 65 | 70 | 75 | |
| Ala | Glu | Gly | Tyr | Leu | Ala | His | Pro | Val | Asn | Ala | Tyr | Lys | Leu | Val | 80 | 85 | 90 | |
| Lys | Arg | Leu | Asn | Thr | Asp | Trp | Pro | Ala | Leu | Glu | Asp | Leu | Val | Leu | 95 | 100 | 105 | |
| Gln | Asp | Ser | Ala | Ala | Gly | Phe | Ile | Ala | Asn | Leu | Ser | Val | Gln | Arg | 110 | 115 | 120 | |
| Gln | Phe | Phe | Pro | Thr | Asp | Glu | Asp | Glu | Ile | Gly | Ala | Ala | Lys | Ala | 125 | 130 | 135 | |
| Leu | Met | Arg | Leu | Gln | Asp | Thr | Tyr | Arg | Leu | Asp | Pro | Gly | Thr | Ile | 140 | 145 | 150 | |
| Ser | Arg | Gly | Glu | Leu | Pro | Gly | Thr | Lys | Tyr | Gln | Ala | Met | Leu | Ser | 155 | 160 | 165 | |
| Val | Asp | Asp | Cys | Phe | Gly | Met | Gly | Arg | Ser | Ala | Tyr | Asn | Glu | Gly | 170 | 175 | 180 | |
| Asp | Tyr | Tyr | His | Thr | Val | Leu | Trp | Met | Glu | Gln | Val | Leu | Lys | Gln | 185 | 190 | 195 | |
| Leu | Asp | Ala | Gly | Glu | Glu | Ala | Thr | Thr | Thr | Lys | Ser | Gln | Val | Leu | 200 | 205 | 210 | |
| Asp | Tyr | Leu | Ser | Tyr | Ala | Val | Phe | Gln | Leu | Gly | Asp | Leu | His | Arg | 215 | 220 | 225 | |
| Ala | Leu | Glu | Leu | Thr | Arg | Arg | Leu | Leu | Ser | Leu | Asp | Pro | Ser | His | 230 | 235 | 240 | |
| Glu | Arg | Ala | Gly | Gly | Asn | Leu | Arg | Tyr | Phe | Glu | Gln | Leu | Leu | Glu | 245 | 250 | 255 | |
| Glu | Glu | Arg | Glu | Lys | Thr | Leu | Thr | Asn | Gln | Thr | Glu | Ala | Glu | Leu | 260 | 265 | 270 | |
| Ala | Thr | Pro | Glu | Gly | Ile | Tyr | Glu | Arg | Pro | Val | Asp | Tyr | Leu | Pro | 275 | 280 | 285 | |

P1618P2C2.txt

| | | | | | |
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| | 290 | | 295 | | 300 |
| Leu Thr Pro Arg | Arg | Gln Lys Arg Leu | Phe | Cys Arg Tyr His | His |
| | 305 | | 310 | | 315 |
| Gly Asn Arg Ala | Pro | Gln Leu Leu Ile | Ala | Pro Phe Lys Glu | Glu |
| | 320 | | 325 | | 330 |
| Asp Glu Trp Asp | Ser | Pro His Ile Val | Arg | Tyr Tyr Asp Val | Met |
| | 335 | | 340 | | 345 |
| Ser Asp Glu Glu | Ile | Glu Arg Ile Lys | Glu | Ile Ala Lys Pro | Lys |
| | 350 | | 355 | | 360 |
| Leu Ala Arg Ala | Thr | Val Arg Asp Pro | Lys | Thr Gly Val Leu | Thr |
| | 365 | | 370 | | 375 |
| Val Ala Ser Tyr | Arg | Val Ser Lys Ser | Ser | Trp Leu Glu Glu | Asp |
| | 380 | | 385 | | 390 |
| Asp Asp Pro Val | Val | Ala Arg Val Asn | Arg | Arg Met Gln His | Ile |
| | 395 | | 400 | | 405 |
| Thr Gly Leu Thr | Val | Lys Thr Ala Glu | Leu | Leu Gln Val Ala | Asn |
| | 410 | | 415 | | 420 |
| Tyr Gly Val Gly | Gly | Gln Tyr Glu Pro | His | Phe Asp Phe Ser | Arg |
| | 425 | | 430 | | 435 |
| Arg Pro Phe Asp | Ser | Gly Leu Lys Thr | Glu | Gly Asn Arg Leu | Ala |
| | 440 | | 445 | | 450 |
| Thr Phe Leu Asn | Tyr | Met Ser Asp Val | Glu | Ala Gly Gly Ala | Thr |
| | 455 | | 460 | | 465 |
| Val Phe Pro Asp | Leu | Gly Ala Ala Ile | Trp | Pro Lys Lys Gly | Thr |
| | 470 | | 475 | | 480 |
| Ala Val Phe Trp | Tyr | Asn Leu Leu Arg | Ser | Gly Glu Gly Asp | Tyr |
| | 485 | | 490 | | 495 |
| Arg Thr Arg His | Ala | Ala Cys Pro Val | Leu | Val Gly Cys Lys | Trp |
| | 500 | | 505 | | 510 |
| Val Ser Asn Lys | Trp | Phe His Glu Arg | Gly | Gln Glu Phe Leu | Arg |
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<400> 334
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P1618P2C2.txt

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 cgactacgac tggttcttca tcatgcagga tgacacatat gtgcaggccc 900
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 agctggtgct gccactcctg gtggctgaag ctgctgcagc cccggctttc 1850
 ctcgaggcgt ttgcagccaa tgtcctggag ccacgagaac atgcattgct 1900

P1618P2C2.txt

caccctgttg ctggtctacg ggccacgaga aggtggccgt ggagctccag 1950
 acccatttct tgggggtgaag gctgcagcag cggagttaga gcgacggtac 2000
 cctgggacga ggctggcctg gctcgctgtg cgagcagagg ccccttccca 2050
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 ggggctccta taggggggag atttgaccgg caggcttctg cggagggctg 2350
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 gccgcctgg gggccctaac ctattacct ttcctttgtc tgcctcagcc 2700
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<210> 339

<211> 772

<212> PRT

<213> Homo Sapien

<400> 339

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Leu | Ser | Ser | Leu | Leu | Ala | Leu | Leu | Arg | Pro | Ala | Leu | Pro |
| 1 | | | | 5 | | | | | | 10 | | | | 15 |
| Leu | Ile | Leu | Gly | Leu | Ser | Leu | Gly | Cys | Ser | Leu | Ser | Leu | Leu | Arg |
| | | | 20 | | | | | | 25 | | | | | 30 |
| Val | Ser | Trp | Ile | Gln | Gly | Glu | Gly | Glu | Asp | Pro | Cys | Val | Glu | Ala |
| | | | 35 | | | | | | 40 | | | | | 45 |
| Val | Gly | Glu | Arg | Gly | Gly | Pro | Gln | Asn | Pro | Asp | Ser | Arg | Ala | Arg |
| | | | 50 | | | | | | 55 | | | | | 60 |
| Leu | Asp | Gln | Ser | Asp | Glu | Asp | Phe | Lys | Pro | Arg | Ile | Val | Pro | Tyr |
| | | | 65 | | | | | | 70 | | | | | 75 |
| Tyr | Arg | Asp | Pro | Asn | Lys | Pro | Tyr | Lys | Lys | Val | Leu | Arg | Thr | Arg |
| | | | 80 | | | | | | 85 | | | | | 90 |
| Tyr | Ile | Gln | Thr | Glu | Leu | Gly | Ser | Arg | Glu | Arg | Leu | Leu | Val | Ala |
| | | | 95 | | | | | | 100 | | | | | 105 |

P1618P2C2.txt

| | | | |
|-----------------|-------------------------|---------------------|-----|
| Val Leu Thr Ser | Arg Ala Thr Leu Ser | Thr Leu Ala Val Ala | Val |
| 110 | 115 | | 120 |
| Asn Arg Thr Val | Ala His His Phe Pro Arg | Leu Leu Tyr Phe | Thr |
| 125 | 130 | | 135 |
| Gly Gln Arg Gly | Ala Arg Ala Pro Ala | Gly Met Gln Val Val | Ser |
| 140 | 145 | | 150 |
| His Gly Asp Glu | Arg Pro Ala Trp Leu | Met Ser Glu Thr Leu | Arg |
| 155 | 160 | | 165 |
| His Leu His Thr | His Phe Gly Ala Asp | Tyr Asp Trp Phe Phe | Ile |
| 170 | 175 | | 180 |
| Met Gln Asp Asp | Thr Tyr Val Gln Ala | Pro Arg Leu Ala Ala | Leu |
| 185 | 190 | | 195 |
| Ala Gly His Leu | Ser Ile Asn Gln Asp | Leu Tyr Leu Gly Arg | Ala |
| 200 | 205 | | 210 |
| Glu Glu Phe Ile | Gly Ala Gly Glu Gln | Ala Arg Tyr Cys His | Gly |
| 215 | 220 | | 225 |
| Gly Phe Gly Tyr | Leu Leu Ser Arg Ser | Leu Leu Leu Arg Leu | Arg |
| 230 | 235 | | 240 |
| Pro His Leu Asp | Gly Cys Arg Gly Asp | Ile Leu Ser Ala Arg | Pro |
| 245 | 250 | | 255 |
| Asp Glu Trp Leu | Gly Arg Cys Leu Ile | Asp Ser Leu Gly Val | Gly |
| 260 | 265 | | 270 |
| Cys Val Ser Gln | His Gln Gly Gln Gln | Tyr Arg Ser Phe Glu | Leu |
| 275 | 280 | | 285 |
| Ala Lys Asn Arg | Asp Pro Glu Lys Glu | Gly Ser Ser Ala Phe | Leu |
| 290 | 295 | | 300 |
| Ser Ala Phe Ala | Val His Pro Val Ser | Glu Gly Thr Leu Met | Tyr |
| 305 | 310 | | 315 |
| Arg Leu His Lys | Arg Phe Ser Ala Leu | Glu Leu Glu Arg Ala | Tyr |
| 320 | 325 | | 330 |
| Ser Glu Ile Glu | Gln Leu Gln Ala Gln | Ile Arg Asn Leu Thr | Val |
| 335 | 340 | | 345 |
| Leu Thr Pro Glu | Gly Glu Ala Gly Leu | Ser Trp Pro Val Gly | Leu |
| 350 | 355 | | 360 |
| Pro Ala Pro Phe | Thr Pro His Ser Arg | Phe Glu Val Leu Gly | Trp |
| 365 | 370 | | 375 |
| Asp Tyr Phe Thr | Glu Gln His Thr Phe | Ser Cys Ala Asp Gly | Ala |
| 380 | 385 | | 390 |
| Pro Lys Cys Pro | Leu Gln Gly Ala Ser | Arg Ala Asp Val Gly | Asp |
| 395 | 400 | | 405 |
| Ala Leu Glu Thr | Ala Leu Glu Gln Leu | Asn Arg Arg Tyr Gln | Pro |
| 410 | 415 | | 420 |

P1618P2C2.txt

Arg Leu Arg Phe Gln Lys Gln Arg Leu Leu Asn Gly Tyr Arg Arg
 425 430 435
 Phe Asp Pro Ala Arg Gly Met Glu Tyr Thr Leu Asp Leu Leu Leu
 440 445 450
 Glu Cys Val Thr Gln Arg Gly His Arg Arg Ala Leu Ala Arg Arg
 455 460 465
 Val Ser Leu Leu Arg Pro Leu Ser Arg Val Glu Ile Leu Pro Met
 470 475 480
 Pro Tyr Val Thr Glu Ala Thr Arg Val Gln Leu Val Leu Pro Leu
 485 490 495
 Leu Val Ala Glu Ala Ala Ala Ala Pro Ala Phe Leu Glu Ala Phe
 500 505 510
 Ala Ala Asn Val Leu Glu Pro Arg Glu His Ala Leu Leu Thr Leu
 515 520 525
 Leu Leu Val Tyr Gly Pro Arg Glu Gly Gly Arg Gly Ala Pro Asp
 530 535 540
 Pro Phe Leu Gly Val Lys Ala Ala Ala Ala Glu Leu Glu Arg Arg
 545 550 555
 Tyr Pro Gly Thr Arg Leu Ala Trp Leu Ala Val Arg Ala Glu Ala
 560 565 570
 Pro Ser Gln Val Arg Leu Met Asp Val Val Ser Lys Lys His Pro
 575 580 585
 Val Asp Thr Leu Phe Phe Leu Thr Thr Val Trp Thr Arg Pro Gly
 590 595 600
 Pro Glu Val Leu Asn Arg Cys Arg Met Asn Ala Ile Ser Gly Trp
 605 610 615
 Gln Ala Phe Phe Pro Val His Phe Gln Glu Phe Asn Pro Ala Leu
 620 625 630
 Ser Pro Gln Arg Ser Pro Pro Gly Pro Pro Gly Ala Gly Pro Asp
 635 640 645
 Pro Pro Ser Pro Pro Gly Ala Asp Pro Ser Arg Gly Ala Pro Ile
 650 655 660
 Gly Gly Arg Phe Asp Arg Gln Ala Ser Ala Glu Gly Cys Phe Tyr
 665 670 675
 Asn Ala Asp Tyr Leu Ala Ala Arg Ala Arg Leu Ala Gly Glu Leu
 680 685 690
 Ala Gly Gln Glu Glu Glu Glu Ala Leu Glu Gly Leu Glu Val Met
 695 700 705
 Asp Val Phe Leu Arg Phe Ser Gly Leu His Leu Phe Arg Ala Val
 710 715 720
 Glu Pro Gly Leu Val Gln Lys Phe Ser Leu Arg Asp Cys Ser Pro
 725 730 735

P1618P2C2.txt

Arg Leu Ser Glu Glu Leu Tyr His Arg Cys Arg Leu Ser Asn Leu
740 745 750

Glu Gly Leu Gly Gly Arg Ala Gln Leu Ala Met Ala Leu Phe Glu
755 760 765

Gln Glu Gln Ala Asn Ser Thr
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<211> 1572

<212> DNA

<213> Homo Sapien

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ctttttgaag ggtgtgatgc ttggaagcat tttctgtgct ttgatcacta 150
tgctaggaca cattaggatt ggtcatggaa atagaatgca ccaccatgag 200
catcatcacc tacaagctcc taacaaagaa gatatcttga aaatttcaga 250
ggatgagcgc atggagctca gtaagagctt tcgagtatac tgtattatcc 300
ttgtaaaacc caaagatgtg agtctttggg ctgcagtaaa ggagacttgg 350
accaaact gtgacaaagc agagttcttc agttctgaaa atgttaaagt 400
gtttgagtca attaatatgg acacaaatga catgtggtta atgatgagaa 450
aagcttacia atacgccttt gataagtata gagaccaata caactgggtc 500
ttccttgac gccccactac gtttgctatc attgaaaacc taaagtattt 550
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gtagaatcaa tgaaaagact taacagcctt ctcaatatcc cagaaaagtg 700
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 <211> 318
 <212> PRT
 <213> Homo Sapien

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 35 40 45
 Ala Pro Asn Lys Glu Asp Ile Leu Lys Ile Ser Glu Asp Glu Arg
 50 55 60
 Met Glu Leu Ser Lys Ser Phe Arg Val Tyr Cys Ile Ile Leu Val
 65 70 75
 Lys Pro Lys Asp Val Ser Leu Trp Ala Ala Val Lys Glu Thr Trp
 80 85 90
 Thr Lys His Cys Asp Lys Ala Glu Phe Phe Ser Ser Glu Asn Val
 95 100 105
 Lys Val Phe Glu Ser Ile Asn Met Asp Thr Asn Asp Met Trp Leu
 110 115 120
 Met Met Arg Lys Ala Tyr Lys Tyr Ala Phe Asp Lys Tyr Arg Asp
 125 130 135
 Gln Tyr Asn Trp Phe Phe Leu Ala Arg Pro Thr Thr Phe Ala Ile
 140 145 150
 Ile Glu Asn Leu Lys Tyr Phe Leu Leu Lys Lys Asp Pro Ser Gln
 155 160 165
 Pro Phe Tyr Leu Gly His Thr Ile Lys Ser Gly Asp Leu Glu Tyr
 170 175 180
 Val Gly Met Glu Gly Gly Ile Val Leu Ser Val Glu Ser Met Lys
 185 190 195
 Arg Leu Asn Ser Leu Leu Asn Ile Pro Glu Lys Cys Pro Glu Gln
 200 205 210

P1618P2C2.txt

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Met | Ile | Trp | Lys | Ile | Ser | Glu | Asp | Lys | Gln | Leu | Ala | Val | 215 | 220 | 225 |
| Cys | Leu | Lys | Tyr | Ala | Gly | Val | Phe | Ala | Glu | Asn | Ala | Glu | Asp | Ala | 230 | 235 | 240 |
| Asp | Gly | Lys | Asp | Val | Phe | Asn | Thr | Lys | Ser | Val | Gly | Leu | Ser | Ile | 245 | 250 | 255 |
| Lys | Glu | Ala | Met | Thr | Tyr | His | Pro | Asn | Gln | Val | Val | Glu | Gly | Cys | 260 | 265 | 270 |
| Cys | Ser | Asp | Met | Ala | Val | Thr | Phe | Asn | Gly | Leu | Thr | Pro | Asn | Gln | 275 | 280 | 285 |
| Met | His | Val | Met | Met | Tyr | Gly | Val | Tyr | Arg | Leu | Arg | Ala | Phe | Gly | 290 | 295 | 300 |
| His | Ile | Phe | Asn | Asp | Ala | Leu | Val | Phe | Leu | Pro | Pro | Asn | Gly | Ser | 305 | 310 | 315 |

Asp Asn Asp

<210> 342
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<220>
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<400> 342
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<210> 343
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 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 343
 ctggttcttc cttgcacg 18

<210> 344
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 344
 gcccaaatgc cctaaggcgg tatacccc 28

<210> 345
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<210> 346
<211> 25
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<220>
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<400> 347
ccctcatgta ccggctcc 18

<210> 348
<211> 48
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<220>
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<210> 349
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 349
ctatgaaatt aaccctcact aaagggatgt cttccatgcc aaccttc 47

<210> 350
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
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<400> 350
ggattctaatac gactcact atagggcggc gatgtccact ggggctac 48

<210> 351
<211> 48

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<212> DNA
<213> Artificial Sequence

<220>
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<400> 351
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<210> 352
<211> 47
<212> DNA
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<220>
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<400> 352
ggattctaatacgcactcact atagggcacc cacgcgtccg gctgctt 47

<210> 353
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
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<400> 353
ctatgaaatt aaccctcact aaagggacgg gggacaccac ggaccaga 48

<210> 354
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
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<400> 354
ggattctaatacgcactcact atagggcttg ctgcggtttt tgttcctg 48

<210> 355
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 355
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<210> 356
<211> 46
<212> DNA
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<400> 356
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<210> 357
 <211> 48
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 <213> Artificial Sequence

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<400> 357
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<210> 358
 <211> 47
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<220>
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<400> 358
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<210> 359
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 359
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<210> 360
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 360
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<210> 361
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 361
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<210> 362
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 <212> DNA
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<220>
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<400> 362
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<210> 363
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<400> 363
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<210> 364
<211> 47
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<400> 364
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<210> 365
<211> 48
<212> DNA
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<400> 365
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<210> 366
<211> 48
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<400> 366
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<210> 367
<211> 47
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<400> 367
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<210> 368
<211> 47
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 368

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<210> 369

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<212> DNA

<213> Artificial Sequence

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<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

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<210> 371

<211> 48

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

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<210> 372

<211> 47

<212> DNA

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<223> Synthetic Oligonucleotide Probe

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<220>

<223> Synthetic Oligonucleotide Probe

<400> 373

ctatgaaattaacccctcactaaaggagtaggggatgccaccgagta 48

<210> 374

<211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 374
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<210> 375
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 375
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<210> 376
 <211> 997
 <212> DNA
 <213> Homo Sapien

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 tgcttctctt cccaaatggt cttatggact gttgctggga tccccatcct 200
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 ctctcctgct acaattatgg atcaggttca gtcaagaatt gttgtccatt 350
 gaactgggaa tattttcaat ccagctgcta cttcttttct actgacacca 400
 tttcctgggc gttaagttta aagaactgct cagccatggg ggctcacctg 450
 gtggttatca actcacagga ggagcaggaa ttcctttcct acaagaaacc 500
 taaaatgaga gagtttttta ttggactgtc agaccagggt gtcgagggtc 550
 agtggcaatg ggtggacggc acacctttga caaagtctct gagcttctgg 600
 gatgtagggg agcccaacaa catagctacc ctggaggact gtgccaccat 650
 gagagactct tcaaaccxaa ggcaaaattg gaatgatgta acctgtttcc 700
 tcaattatct tcggatttgt gaaatggtag gaataaatcc tttgaacaaa 750
 ggaaaatctc tttaagaaca gaaggcacia ctcaaattgt taaagaagga 800
 agagcaagaa catggccaca cccaccgccc cacacgagaa atttgtgcgc 850
 tgaacttcaa aggacttcat aagtatttgt tactctgata caaataaaaa 900

P1618P2C2.txt

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 997

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<211> 219

<212> PRT

<213> Homo Sapien

<400> 377

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Ile Leu Phe Leu Ser Ala Cys Phe Ile Thr Arg Cys Val Val Thr
35 40 45

Phe Arg Ile Phe Gln Thr Cys Asp Glu Lys Lys Phe Gln Leu Pro
50 55 60

Glu Asn Phe Thr Glu Leu Ser Cys Tyr Asn Tyr Gly Ser Gly Ser
65 70 75

Val Lys Asn Cys Cys Pro Leu Asn Trp Glu Tyr Phe Gln Ser Ser
80 85 90

Cys Tyr Phe Phe Ser Thr Asp Thr Ile Ser Trp Ala Leu Ser Leu
95 100 105

Lys Asn Cys Ser Ala Met Gly Ala His Leu Val Val Ile Asn Ser
110 115 120

Gln Glu Glu Gln Glu Phe Leu Ser Tyr Lys Lys Pro Lys Met Arg
125 130 135

Glu Phe Phe Ile Gly Leu Ser Asp Gln Val Val Glu Gly Gln Trp
140 145 150

Gln Trp Val Asp Gly Thr Pro Leu Thr Lys Ser Leu Ser Phe Trp
155 160 165

Asp Val Gly Glu Pro Asn Asn Ile Ala Thr Leu Glu Asp Cys Ala
170 175 180

Thr Met Arg Asp Ser Ser Asn Pro Arg Gln Asn Trp Asn Asp Val
185 190 195

Thr Cys Phe Leu Asn Tyr Phe Arg Ile Cys Glu Met Val Gly Ile
200 205 210

Asn Pro Leu Asn Lys Gly Lys Ser Leu
215

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tattcctacc atttcacaaa tccg 24

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gcagattttg aggacagcca cctcca 26

<210> 382
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ggccttgcag acaaccgt 18

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<400> 384

cagctgccct tccccaacca 20

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<223> Synthetic oligonucleotide probe

<400> 387

gggccatcac agctccct 18

<210> 388

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 388

gggatgtggt gaacacagaa ca 22

<210> 389

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 389

tgccagctgc atgctgccag tt 22

<210> 390

<211> 20

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 <210> 391
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<210> 399
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<220>
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<400> 399
 ccaggagagc tggcgatg 18

<210> 400
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<220>
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<400> 400
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<210> 401
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<220>
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<400> 401
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<210> 402
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<400> 402
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<210> 403
<211> 22
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<220>
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<400> 403
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<210> 404
<211> 24
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<220>
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<400> 404
caggccccct tgatctgtac ccca 24

<210> 405
<211> 23
<212> DNA
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<220>
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<400> 405
gggacgtgct tctacaagaa cag 23

<210> 406
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 406
caggcttaca atgttatgat cagaca 26

<210> 407
<211> 31
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<400> 407
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<210> 408
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<400> 408
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<400> 410
gccaggcctc acattcgt 18

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<400> 411
ctccctgaat ggcagcctga gca 23

<210> 412
<211> 24
<212> DNA
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<220>
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<400> 412
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<210> 413

<211> 19
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<220>
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<400> 413
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<210> 414
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<220>
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<400> 414
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<210> 415
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<220>
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<400> 415
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<210> 416
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<400> 416
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<400> 417
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<400> 418

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<400> 419
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<220>
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<400> 421
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<210> 422
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<212> DNA
<213> Homo Sapien

<400> 422
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tcaaattccag caatcgaacc ccagtgggtac aggaatttga aagtgtggaa 200
ctgtcttgca tcattacgga ttcgcagaca agtgacccca ggatcgagtg 250
gaagaaaatt caagatgaac aaaccacata tgtgtttttt gacaacaaaa 300
ttcaggggaga cttggcggggt cgtgcagaaa tactggggaa gacatccctg 350
aagatctgga atgtgacacg gagagactca gccctttatc gctgtgaggt 400
cgttgctcga aatgaccgca aggaaattga tgagattgtg atcgagttaa 450
ctgtgcaagt gaagccagtg acccctgtct gtagagtgcc gaaggctgta 500
ccagtaggca agatggcaac actgcactgc caggagagtg agggccaccc 550

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 <213> Homo Sapien

<400> 423

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 35 40 45
 Phe Glu Ser Val Glu Leu Ser Cys Ile Ile Thr Asp Ser Gln Thr
 50 55 60
 Ser Asp Pro Arg Ile Glu Trp Lys Lys Ile Gln Asp Glu Gln Thr
 65 70 75
 Thr Tyr Val Phe Phe Asp Asn Lys Ile Gln Gly Asp Leu Ala Gly
 80 85 90
 Arg Ala Glu Ile Leu Gly Lys Thr Ser Leu Lys Ile Trp Asn Val
 95 100 105
 Thr Arg Arg Asp Ser Ala Leu Tyr Arg Cys Glu Val Val Ala Arg
 110 115 120
 Asn Asp Arg Lys Glu Ile Asp Glu Ile Val Ile Glu Leu Thr Val
 125 130 135
 Gln Val Lys Pro Val Thr Pro Val Cys Arg Val Pro Lys Ala Val
 140 145 150
 Pro Val Gly Lys Met Ala Thr Leu His Cys Gln Glu Ser Glu Gly
 155 160 165
 His Pro Arg Pro His Tyr Ser Trp Tyr Arg Asn Asp Val Pro Leu
 170 175 180
 Pro Thr Asp Ser Arg Ala Asn Pro Arg Phe Arg Asn Ser Ser Phe
 185 190 195
 His Leu Asn Ser Glu Thr Gly Thr Leu Val Phe Thr Ala Val His
 200 205 210
 Lys Asp Asp Ser Gly Gln Tyr Tyr Cys Ile Ala Ser Asn Asp Ala
 215 220 225
 Gly Ser Ala Arg Cys Glu Glu Gln Glu Met Glu Val Tyr Asp Leu
 230 235 240
 Asn Ile Gly Gly Ile Ile Gly Gly Val Leu Val Val Leu Ala Val
 245 250 255
 Leu Ala Leu Ile Thr Leu Gly Ile Cys Cys Ala Tyr Arg Arg Gly
 260 265 270
 Tyr Phe Ile Asn Asn Lys Gln Asp Gly Glu Ser Tyr Lys Asn Pro
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 290 295 300
 Asp Phe Arg His Lys Ser Ser Phe Val Ile

305

P1618P2C2.txt
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<221> unsure
<222> 9, 11, 13, 15, 17
<223> unknown amino acid

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1 5 10 15

Cys Xaa Asn